



U.S. Department
of Transportation
**Federal Aviation
Administration**



SDR

Service Difficulty Reporting

November 23, 1997 - November 29, 1997
Summary

GENERAL AVIATION, ZAC-327

You can improve Air Safety by reporting the problem when you see it!

SECTION

- I Significant Occurrence Report
- II Domestic Service Difficulty Report
- III International Service Difficulty Report
- IV SDR Totals by District Office
- V Index By Aircraft Make and Model
- VI Joint Aircraft System/Component Code Table

ISSUE: 97-48



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SDR SUMMARY

General Aviation, ZAC-327



This summary includes domestic (United States) Service Difficulty Reports (SDRs) entered into the data base for aircraft weighing 12,500 lbs. and below. It also includes reports on aeronautical products (engines, propellers, and components), and all helicopters. A separate section for International SDRs for aircraft weighing 12,500 lbs. and under has also been included. Under a data exchange agreement, International SDRs are submitted to the FAA by the Civil Aviation Authority of other countries (currently, Canada - CAN, and Australia - AUS). All reports are sorted by aircraft make, model group (basic model), and Joint Aircraft System/Component (JASC) code. Within each aircraft model group, the specific model shown may vary, but similar types of reports will be grouped together and listed in ascending order by their JASC code. Each field contains all information submitted to the FAA. Some fields are not included in order to make the summary easier to read. Additional information may be obtained by referring to the "operator control number." Send your request to the Aviation Data Systems Branch, AFS-620 at the address or phone below.

The Regulatory Support Division (AFS-600) has established a "HomePage" on the Internet through which the same information is available. There is a large quantity of other information available through the AFS-600 HomePage such as the most current SDR system codes (i.e., Joint Aircraft System/Component Codes). The SDR Question and Answer Section of the Summary will also be transferred to the AFS-600 HomePage to simplify the process of preparing the SDR Summaries in the PDF format each week. There are "hot buttons" to take you to other locations and sites where FAA Flight Standards Service Information is available. The AFS-600 "HomePage" address is:

<http://www.mmac.jccbi.gov/afs/afs600>

"The Service Difficulty Reports in this publication are derived from unverified information submitted by the aviation community without FAA verification for accuracy. The number of SDRs submitted is not an indication of the mechanical reliability or fitness of an airline or individual operator, and the information should not be used as such."

Comments are welcomed and may be directed to:

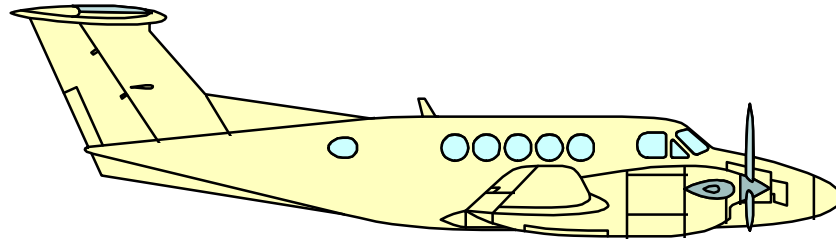
*Federal Aviation Administration
Aviation Data Systems Branch, AFS-620
P.O. Box 25082
Oklahoma City, OK 73125-5029
Phone: (405) 954-4171, Fax: (405) 954-4748*

Your continued participation is essential and is an integral part of ensuring aviation safety. Thank you for supporting the Service Difficulty Program! If you have any questions regarding this special notice you can contact John Jackson at (405) 954-6486, or Jim Gillespie at (405) 954-1141, or Blake McDonald at (405) 954-0307 in the Aviation Systems Branch (AFS-620). Their E-mail addresses are:

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blake_mcdonald@mmacmail.jccbi.gov



SIGNIFICANT OCCURRENCE REPORT





U.S. Department
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**Federal Aviation
Administration**

THE SIGNIFICANT OCCURRENCE REPORT



The Significant Occurrence Report is a compilation all of the star bordered reports that appear in the General Aviation Service Difficulty Report (SDR) Summary, ZAC-327. The Significant Occurrence Report is used to highlight industry problem areas to field inspectors and the aviation public.

Limited analysis is performed by the Aviation Data Systems Branch, AFS-620 during the preparation of the "Significant Occurrence Report", which is generated each week and is included in the front of the Air Carrier SDR Summary. Significant Reports are hand selected by AFS-620's inspectors based on the individual merit of each report. The criteria for selection includes, but is not limited to, items that indicate high failure rates; items related to accidents or incidents; or design or maintenance failures which may affect the safe operation of the aircraft.

In some cases, this limited analysis of SDR data leads to the preparation of information bulletins which are routed to the appropriate product certification office for further investigation of the problem. The end result may be the issuance of an airworthiness directive (AD) by the Aircraft Certification Service (AIR) if warranted.

The Significant Occurrence Report (section I) of the weekly SDR Summary is not intended to be a summary of all significant events and should not be used as such. We recommend that you review further the applicable sections of the SDR summary that may be of interest.

GENERAL AVIATION SIGNIFICANT OCCURRENCE REPORT

11/23/97 - 11/29/97 ISSUE: 97-48 ZAC-327

| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------|-----------------------|----------------------|--------------------------|----------------------------------|-------------|----------------------------|
| 2823 | 477RM LIV060 | AMTR LANCAIR | | | | SELECTOR VALVE FU560 | MISMANUFACTURED FUEL SELECTOR | 12 | 11/12/97 97ZZZX4843 |
| ***** | POST-ACCIDENT INVESTIGATION BY THE NTSB DISCOVERED THE FUEL SELECTOR VALVE SUPPLIED BY THE KIT MANUFACTURER WAS FOUND MODIFIED FROM ORIGINAL DESIGN CONFIGURATION. THE VALVE WAS MODIFIED BY A 'NON-MANUFACTURER SOURCE'. THE CONFIGURATION OF THE VALVE WAS CHANGED FROM AN 'OFF/LEFT/RIGHT' OPERATION TO A 'OFF/BOTH/LEFT/RIGHT' MODE OF OPERATION. THE KIT MANUFACTURER DOES NOT RECOMMEND A 'BOTH' POSITION FOR THESE AIRCRAFT. TESTS SHOWED WHEN ONE FUEL TANK WAS EMPTY AND THE OPPOSITE TANK WAS BEING USED, THE SUBJECT VALVE WOULD ALLOW AIR FROM THE EMPTY TANK TO BE DRAWN INTO THE FUEL SYSTEM; THUS, CAUSING OVERLY LEAN MIXTURES AND/OR INTERRUPTION IN FUEL FLOW. | | | | | | | | |
| 7240 | 400AC BE12 | BEECH B100 | GARRTT TPE3316 | | | PLENUM | FAILED RT ENG | 9187 850 | 11/4/97 97ZZZX4851 |
| ***** | ENG FAILURE AT T/O. CREW HEARD A LOUD POP, THE RT ENG ITT TEMP ROSE AND FLAMES FROM THE RT ENG. UNABLE TO KILL THE ENG USING THE EMERG CUTOFF LEVER, LEVER WAS JAMMED. THE ENG WAS SHUT DOWN USING THE FIREWALL SOV. FIRE BOTTLE WAS DISCHARGED AND FIRE WAS PUT OUT. THE LEFT ENG SECURED AND ACFT EVAC. INSP REVEALED THAT THE PLENUM CASE BROKE OPEN RADIALY TOWARD THE TOP OF THE ENG. THE OPENED PART WAS JAMMED BEHIND THE EMERG CUTOFF LEVER RENDERING IT INOP. INSP OF THE PLENUM CASE SUGGESTS THAT A CRACK BEGAN AT THE POINT WHERE THE WELDS OF BLEED AIR, AND THE P3 BOSSES COME TOGETHER. THE CRACK PROGRESSED TO WHERE THE PLENUM FAILED IN SUCH A WAY THAT THE SHEET METAL RIPPED OPEN TOTAL IS 24 INCHES. | | | | | | | | |
| 7200 | | BEECH 200BEECH | PWA PT6A41 | | | ENGINE | FAILED EXHAUST STACK | | 10/3/97 CA971015062 |
| ***** | (CAN) DURING CLIMB OUT THE PILOT SAW FLAMES PULSING FROM NR2 ENGINE, ALL ENGINE PARAMETERS WERE NORMAL. THE ENGINE WAS SHUTDOWN AND THE AIRCRAFT LANDED WITHOUT INCIDENT. POST FLIGHT BORESCOPE INSPECTION FOUND NO ABNORMALITIES. FUEL NOZZELS AND THE OIL FILTERS WERE UNCONTAMINATED. A MAINTENANCE RUN REVEALED THAT MAX TGT WAS ACHIEVED PRIOR TO TARGET TORQUE. GAS GENERATOR SPEED AND FUEL FLOW WERE ALSO HIGH. REMOVAL OF THE POWER SECTION FOUND MINOR COATING LOSS ON THE CT VANE ASSEMBLY WITH RED//ORANGE DISCOLORATION ON THE CT BLADES ROOTS. THE LARGE EXIT DUCT HAD 3 ONE INCH CRACKS. THE ENGINE WILL BE SENT FOR INVESTIGATION AND REPAIR. | | | | | | | | |
| 5210 | 831FG 830511S | HUGHES 369HS | | | | DOOR 90210001 | DEPARTED CABIN RT MAIN | | 10/3/97 97ZZZX4860 |
| ***** | DURING FLIGHT, THE RIGHT MAIN DOOR OPENED, THEN DEPARTED THE AIRCRAFT. THE DOOR HINGES WERE MODIFIED BY THE INSTALLATION OF QUICK REMOVAL DOOR HINGES STC SH2530 NM. DISCOVERED DURING INSPECTION THAT THE LATCHING FEATURE USED WAS NOT PROPERLY ENGAGED ALLOWING THE DOOR TO DEPART THE HELICOPTER. SUBMITTER STATED THE STC DOES NOT CONTAIN PRE-FLIGHT INFORMATION FOR THE PILOT TO FOLLOW. THE STC NEEDS TO BE REVISED TO INCORPORATE PILOT INFO. | | | | | | | | |
| 6320 HEAA | 161KA A940016 | KAMAN K1200 | | | KAMAN K974002101 | OIL PUMP K974120107 | SEIZED M/R TRANSMISSION | 1687 | 11/6/97 97ZZZX4858 |
| ***** | OIL PUMP SEIZED ON START-UP. NO SHEAR SHAFT WAS INCORPORATED IN OIL PUMP. SEIZURE CAUSED DAMAGE TO PUMP DRIVE RING GEAR TEETH INSIDE TRANSMISSION ASSY AS WELL AS OIL PUMP ASSY. IF SHEAR SHAFT WAS INCORPORATED IN OIL PUMP, ONLY PUMP WOULD HAVE NEEDED CHARGING IN THIS CASE, NOT PUMP AND TRANSMISSION. | | | | | | | | |

(End of GENERAL AVIATION SIGNIFICANT OCCURRENCE REPORT)

FEDERAL AVIATION ADMINISTRATION
SIGNIFICANT OCCURRENCE REPORT INDEX

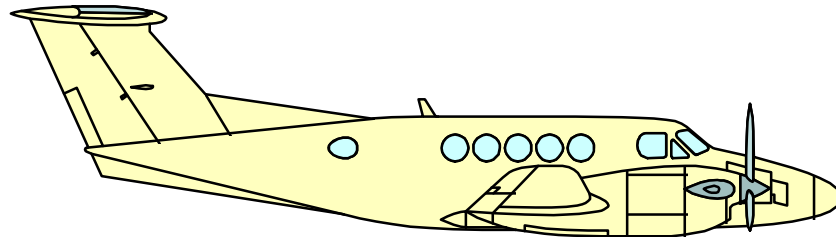
Showing Specific Part Numbers and Aircraft Model by Year

FOR THE PERIOD OF: 11/23/97 To 11/29/97

| <u>PART NUMBER</u> | | | <u>YEAR</u> | | | | | | | | | | |
|---------------------------------------------------|-------------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| <u>PART NAME</u> | <u>ACFT MODEL</u> | <u>TOTAL</u> | <u>1987</u> | <u>1988</u> | <u>1989</u> | <u>1990</u> | <u>1991</u> | <u>1992</u> | <u>1993</u> | <u>1994</u> | <u>1995</u> | <u>1996</u> | <u>1997</u> |
| 39140653 | | | | | | | | | | | | | |
| LINK | DC932 | 1 | - | - | - | - | - | - | - | - | - | - | 1 |
| TOTAL of # 39140653 - - - - - | | 1 | - | - | - | - | - | - | - | - | - | - | 1 |
| 90210001 | | | | | | | | | | | | | |
| DOOR | 369HS | 1 | - | - | - | - | - | - | - | - | - | - | 1 |
| TOTAL of # 90210001 - - - - - | | 1 | - | - | - | - | - | - | - | - | - | - | 1 |
| 99710000804 | | | | | | | | | | | | | |
| EXHAUST MANIFOLD | unknown | 1 | - | - | - | - | - | - | - | - | - | - | 1 |
| TOTAL of # 99710000804 - - - - - | | 1 | - | - | - | - | - | - | - | - | - | - | 1 |
| AN2616 | | | | | | | | | | | | | |
| BOLT | DC932 | 1 | - | - | - | - | - | - | - | - | - | - | 1 |
| TOTAL of # AN2616 - - - - - | | 1 | - | - | - | - | - | - | - | - | - | - | 1 |
| FU560 | | | | | | | | | | | | | |
| SELECTOR VALVE | LANCAIR | 1 | - | - | - | - | - | - | - | - | - | - | 1 |
| TOTAL of # FU560 - - - - - | | 1 | - | - | - | - | - | - | - | - | - | - | 1 |
| K974120107 | | | | | | | | | | | | | |
| OIL PUMP | K1200 | 1 | - | - | - | - | - | - | - | - | - | - | 1 |
| TOTAL of # K974120107 - - - - - | | 1 | - | - | - | - | - | - | - | - | - | - | 1 |
| M832481012 | | | | | | | | | | | | | |
| PACKING | 230 | 1 | - | - | - | - | - | - | - | - | 1 | - | - |
| TOTAL of # M832481012 - - - - - | | 1 | - | - | - | - | - | - | - | - | 1 | - | - |
| TOTAL for ALL (7) PART NUMBERS: - - - - - | | 7 | - | - | - | - | - | - | - | - | 1 | - | 6 |
| END OF SIGNIFICANT OCCURRENCE REPORT INDEX | | | | | | | | | | | | | |



DOMESTIC SERVICE DIFFICULTY REPORT



DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT**11/23/97 - 11/29/97 ISSUE: 97-48 ZAC-327**

| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|-----------------------------|-------------------------------|------------------------------|----------------------------------|--------------------------------|-------------------|------------------------------------|
| 2823 | 477RM | AMTR | | | | SELECTOR VALVE | MISMANUFACTURED | 12 | 11/12/97 |
| | LIV060 | LANCAIR | | | | FU560 | FUEL SELECTOR | | 97ZZZX4843 |
| ***** | POST-ACCIDENT INVESTIGATION BY THE NTSB DISCOVERED THE FUEL SELECTOR VALVE SUPPLIED BY THE KIT MANUFACTURER WAS FOUND MODIFIED FROM ORIGINAL DESIGN CONFIGURATION. THE VALVE WAS MODIFIED BY A 'NON-MANUFACTURER SOURCE'. THE CONFIGURATION OF THE VALVE WAS CHANGED FROM AN 'OFF/LEFT/RIGHT' OPERATION TO A 'OFF/BOTH/LEFT/RIGHT' MODE OF OPERATION. THE KIT MANUFACTURER DOES NOT RECOMMEND A 'BOTH' POSITION FOR THESE AIRCRAFT. TESTS SHOWED WHEN ONE FUEL TANK WAS EMPTY AND THE OPPOSITE TANK WAS BEING USED, THE SUBJECT VALVE WOULD ALLOW AIR FROM THE EMPTY TANK TO BE DRAWN INTO THE FUEL SYSTEM; THUS, CAUSING OVERLY LEAN MIXTURES AND/OR INTERRUPTION IN FUEL FLOW. | | | | | | | | |
| 5312 | 734UC | CESSNA | | | | BULKHEAD | CRACKED | 8613 | 11/10/97 |
| DVPR | 17269116 | 172N | | | | 051300634 | LT FWD DOOR POST | | 97ZZZX4845 |
| | INSPECTION REVEALED A CRACK APPROXIMATELY 1.1250 INCHES LONG ON THE LT AFT SECTION OF THE FORWARD DOOR POST. CRACK STARTS ON THE REAR HOLE OF THE LOWER DOOR HINGE ATTACHMENT. CRACK PROGRESSES EITHER SIDE FROM HOLE. | | | | | | | | |
| 5312 | 734UC | CESSNA | | | | BULKHEAD | CRACKED | 8613 | 11/10/97 |
| DVPR | 17269116 | 172N | | | | 05132823 | LT FWD DOOR POST | | 97ZZZX4844 |
| | INSPECTION REVEALED A CRACK APPROXIMATELY 1.1250 INCHES LONG ON THE LT AFT SECTION OF THE FORWARD DOOR POST. CRACK STARTS ON THE REAR HOLE OF THE LOWER DOOR HINGE ATTACHMENT. CRACK PROGRESSES EITHER SIDE FROM HOLE. | | | | | | | | |
| 2913 | 3670Y | CESSNA | | | | LEE PLUG | MISSING | 3839 | 10/23/97 |
| NA3R | 21058170 | 210C | | | | | HYD PWR PACK | 13 | 97ZZZX4838 |
| | THE HYDRAULIC POWER PACK FAILED WHEN PILOT ATTEMPTED TO EXTEND LANDING GEAR. THE HYDRAULIC POWER PACK LOST ALL PRESSURE AND DUMPED HYDRAULIC FLUID OUT THE BACK. THE AIRCRAFT LANDED GEAR UP. SENT HYDRAULIC POWER PACK TO THE COMPANY THAT OVERHAULED UNIT IN 1994. THIS COMPANY'S EVALUATION OF THE POWER PACK'S FAILURE WAS DUE TO A MISSING LEE PLUG AND STATED THE LEE PLUG HOLE IS OVERSIZED AND WILL NOT HOLD WHEN PRESSURE IS APPLIED. | | | | | | | | |
| 2750 | 16JP | PIPER | | | | BRACKET | CRACKED | 5000 | 10/16/97 |
| | 2825956 | PA28140 | | | | 6273800 | FLAP CONTROL | | 97ZZZX4841 |
| | CRACKS AT CORNER RADIUS OF ATTACH FLANGE ON FLAP HANDLE SUPPORT BRACKET. | | | | | | | | |
| 7160 | 9258N | PIPER | | | | AIRBOX | CRACKED | 317 | 10/27/97 |
| SL5R | 2843014 | PA28181 | | | | 8547402 | INDUCTION AIR | | 97ZZZX4847 |
| | DURING ANNUAL INSPECTION, FOUND INDUCTION AIRBOX CRACKED. CRACKS WERE IN CARBURETOR INLET VALVE PORTION OF BOX ON EITHER SIDE OF CARBURETOR ATTACHMENT ADAPTER. SUSPECT CAUSE OF CRACKS IS EXCESSIVE SIDE LOADING OF DUCT THAT ATTACHES AIRBOX TO THE AIR INLET ON LEFT SIDE OF COWLING. IF DUCT ATTACHMENT AT COWL WAS PLACED AT A BETTER ANGLE, THE SIDE LOAD WOULD BE REDUCED. IN ORDER TO DRAIN THE CARBURETOR BOWL, THE AIRBOX MUST BE REMOVED FROM THE CARBURETOR. ALSO, THE SUPPORT CLAMP FOR THE CARBURETOR HEAT CONTROL CABLE CHAFES ONE OF THE ENGINE MOUNT TUBES. A RE-ROUTED LONGER CONTROL CABLE SHOULD ELIMINATE CHAFE PROBLEM. | | | | | | | | |

(End of DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT)

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS**11/23/97 - 11/29/97 ISSUE: 97-48 ZAC-327**

| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
|--------------------------------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------|-----------------------------|-------------------------------|------------------------------|----------------------------------|--------------------------------|-------------------|------------------------------------|
| 6320 HEEA | | AEROSP AS355F1 | | | | SHAFT 355A32209620 | CORRODED XMSN | | 11/10/97 HEEA0011865 |
| CORROSION ON OUTBOARD FACE. DENTS ON ROLLER BEARING RACE ON SHAFT. | | | | | | | | | |
| 5302 HEEA | 9151A 238540 | AEROSP SA315B | | | | BOOM ASSY 315A221110001 | BENT TAIL BOOM | 767 | 11/13/97 HEEA0011986 |
| TAIL BOOM BENT TUBES. | | | | | | | | | |
| 5510 HEEA | 9151A 238540 | AEROSP SA315B | | | | STABILIZER 315A3510000251 | CRACKED HORIZ STAB | 192 | 11/13/97 HEEA0011987 |
| STABILIZER CRACKED AT FLANGE. | | | | | | | | | |
| 2312 HEEA | 6748D 51106 | BELL 206L3 | | | KFS594 | CONTROL 071012740004 | DEFECTIVE COCKPIT | | 11/12/97 HEEA0011968 |
| KFS594 CONTROL HAS NO DISPLAY. | | | | | | | | | |
| 2432 HEEA | 6610Y 51419 | BELL 206L3 | | | | BATTERY 3055401C | FAILED DC SYS | | 11/12/97 HEEA0011964 |
| BATTERY HOT CAUTION LIGHT ILLUMINATED ON FIRST DAY OF OPERATION AFTER BATTERY INSTALLATION. REPLACED WITH SERVICEABLE BATTERY. | | | | | | | | | |
| 2436 HEEA | 27702 45300 | BELL 206L1 | | | | REGULATOR 163404751 | FAILED DC SYS | | 11/10/97 HEEA0011880 |
| VOLTAGE WILL NOT STAY SET. | | | | | | | | | |
| 2436 HEEA | 54641 51184 | BELL 206L3 | | | | REGULATOR 206075447007 | FAILED DC GEN SYS | | 11/19/97 HEEA0012048 |
| GENERATOR DROPS OFF LINE. | | | | | | | | | |
| 2436 HEEA | 54641 51184 | BELL 206L3 | | | | REGULATOR 206075447007 | FAILED DC SYS | | 11/12/97 HEEA0011940 |
| GENERATOR WOULD NOT COME ON LINE. | | | | | | | | | |
| 2436 HEEA | 6610Y 51419 | BELL 206L3 | | | | REGULATOR 206075447007 | FAILED DC SYS | | 11/12/97 HEEA0011941 |
| GENERATOR WOULD NOT COME ON LINE. | | | | | | | | | |
| 2436 HEEA | 3108E 51498 | BELL 206L3 | | | | REGULATOR 206075447007 | FAILED DC SYS | | 11/10/97 HEEA0011878 |
| GENERATOR FALLS OFF LINE AFTER 20 MINUTES. | | | | | | | | | |
| 2436 HEEA | 4282Z 51499 | BELL 206L3 | | | | REGULATOR 206075447007 | FAILED DC GEN SYS | | 11/19/97 HEEA0012049 |
| GENERATOR WILL NOT COME ON LINE. | | | | | | | | | |
| 2841 HEEA | 5005B 45175 | BELL 206L1 | | | | INDICATOR 206063633001 | DEFECTIVE FUEL QTY | | 11/10/97 HEEA0011879 |
| CANNOT CALIBRATE FUEL QTY INDICATOR. SHOWS 25 LBS WITH NO FUEL. GLASS CRACKED. | | | | | | | | | |

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

11/23/97 To 11/29/97 ISSUE: 97-48 ZAC-327

| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
|-----------------------------------------------------------------------------------------------------|----------------------|-------------------------|---------------------|-----------------------|----------------------|-----------------------------|------------------------|-----------|----------------------------|
| 2842 HEEA | 3116L 51529 | BELL 206L3 | | | | TRANSMITTER 206364601101 | FAILED FUEL QTY | | 11/19/97 HEEA0012050 |
| FUEL QTY DROPS 250 TO 300 POUNDS INTERMITTENTLY. | | | | | | | | | |
| 2913 HEEA | 5006F 45181 | BELL 206L1 | | | | PUMP 206076030101 | WORN HYD SYS | | 11/18/97 HEEA0012031 |
| WORN PUMP DRIVE SHAFT SPLINE. | | | | | | | | | |
| 2913 HEEA | 1081T 45411 | BELL 206L1 | | | | PUMP 206076030101 | WORN HYD SYS | | 11/12/97 HEEA0011976 |
| PUMP SHAFT SPLINES WORN. | | | | | | | | | |
| 3213 HEEA | 205FC 51130 | BELL 206L3 | | | | SKID TUBE 206324003 | CORRODED LT SKID | | 11/12/97 HEEA0011961 |
| SKID TUBE CORRODED DEPTH BEYOND LIMITS. SCRAPPED AND REPLACED WITH SERVICEABLE SKID TUBE. | | | | | | | | | |
| 3213 HEEA | 205FC 51130 | BELL 206L3 | | | | SKID TUBE 206324004 | CRACKED RT SKID | | 11/12/97 HEEA0011960 |
| RT SKID TUBE CRACKED BELOW AFT CROSSTUBE SUPPORT. SCRAPPED AND REPLACED WITH SERVICEABLE SKID TUBE. | | | | | | | | | |
| 3340 HEEA | 5006F 45181 | BELL 206L1 | | | WHELEN | POWER SUPPLY A490A | FAILED STROBE LIGHT | | 11/13/97 HEEA0012017 |
| POWER SUPPLY NO POWER. | | | | | | | | | |
| 3340 HEEA | 2246Q 45752 | BELL 206L1 | | | WHELEN | POWER SUPPLY A490A | FAILED STROBE LIGHT | | 11/13/97 HEEA0012016 |
| POWER SUPPLY DOES NOT WORK. CAUSES SHORT IN WIRE. | | | | | | | | | |
| 3416 HEEA | 2268G 3603 | BELL 206B3 | | | ACK | ENCODER A30 | FAILED COCKPIT | | 11/13/97 HEEA0012019 |
| ENCODER NO ALTITUDE OUTPUT. CALIBRATE TO 28 VDC. | | | | | | | | | |
| 3416 HEEA | 27702 45300 | BELL 206L1 | | | ACK | ENCODER A30 | FAILED COCKPIT | | 11/10/97 HEEA0011888 |
| ENCODER HAS NO VALID OUTPUT. | | | | | | | | | |
| 3416 HEEA | 1078D 45397 | BELL 206L1 | | | ACK | ENCODER A30 | FAILED COCKPIT | | 11/10/97 HEEA0011887 |
| ENCODER HAS NO VALID OUTPUT. | | | | | | | | | |
| 3416 HEEA | 5745N 45489 | BELL 206L1 | | | | ALTIMETER 59323H5 | DEFECTIVE COCKPIT | | 11/13/97 HEEA0012007 |
| ALTIMETER EXCESSIVE FRICTION ERROR. | | | | | | | | | |
| 3416 HEEA | 41791 51465 | BELL 206L3 | | | ACK | ENCODER A30 | FAILED COCKPIT | | 11/13/97 HEEA0012018 |
| ALTITUDE ENCODER NO VALID OUTPUT FROM ENCODER. CALIBRATE TO 28 VDC. | | | | | | | | | |

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

11/23/97 To 11/29/97 ISSUE: 97-48 ZAC-327

| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------|---------------------|-----------------------|----------------------|----------------------------|----------------------------|-----------|----------------------------|
| 3421 HEEA | 107PH 2789 | BELL 206B3 | | | | INDICATOR 5040017901 | FAILED COCKPIT ATTITUDE | | 11/12/97 HEEA0011962 |
| UPON INSTALLATION, ATTITUDE INDICATOR CAUSED CIRCUIT BREAKER TO POP. REPLACED WITH SERVICEABLE PART. | | | | | | | | | |
| 3423 HEEA | 107PH 2789 | BELL 206B3 | | | | COMPASS C2300L424 | FAILED COCKPIT | | 11/19/97 HEEA0012042 |
| COMPASS WILL NOT ADJUST. | | | | | | | | | |
| 3425 HEEA | 2163Y 3496 | BELL 206B3 | | | KFM112 | TRANSMITTER 071105200 | FAILED COCKPIT | | 11/12/97 HEEA0011939 |
| COULD NOT CALIBRATE FLUX VALVE, OFF 20DEG. | | | | | | | | | |
| 3425 HEEA | 5744Y 45465 | BELL 206L1 | | | | HSI CONTROL 066304605 | INOPERATIVE COCKPIT | | 11/12/97 HEEA0011938 |
| HSI INDICATOR LIGHTS INOPERATIVE. | | | | | | | | | |
| 3452 HEEA | 103PH 3000 | BELL 206B3 | | | KT76 | TRANSPONDER 066106200 | DEFECTIVE COCKPIT | | 11/10/97 HEEA0011862 |
| IDENT LIGHT INOPERATIVE. PERFORMED PRELIMINARY INSPECTION. REPLACED V301 PHOTOCCELL P/N 134-05005-0002. REPLACED DS301 BULB P/N 037-00025-0000, REPAIRED. ALSO REPLACED FACEPLATE P/N 200-2020-01, LOCKING SCREW P/N 076-0921-00 AND GROOVE PIN P/N 090-0265-00. REPAIRED.BENCH CHECK GOOD. | | | | | | | | | |
| 3452 HEEA | 1078G 45398 | BELL 206L1 | | | KT76 | TRANSPONDER 066106200 | DEFECTIVE COCKPIT | | 11/10/97 HEEA0011857 |
| KNOB BROKE OFF FACE. REPLACED KNOB. ALSO REPLACED WEAK V101 CAVITY OSCILLATOR. REPAIRED UNIT. ADJUSTED PULSE AND FREQUENCY. BENCH CHECK GOOD. | | | | | | | | | |
| 3452 HEEA | 41791 51465 | BELL 206L3 | | | KT76 | TRANSCEIVER 066106200 | FAILED COCKPIT | | 11/10/97 HEEA0011869 |
| TRANSCEIVER INOPERATIVE. PERFORMED PRELIMINARY INSPECTION. FOUND POWER OUT LOW. ADJUSTED V101 CAVITY TUBE. NO HELP. REPLACED V101 CAVITY TUBE P/N C2080A, V301 PHOTOCCELL P/N 134-05005-0002 AND FACEPLATE P/N 200-02020-0001, REPAIRED. ADJUSTED PULSE WIDTH AND FREQUENCY.BENCH CHECK GOOD. | | | | | | | | | |
| 3457 HEEA | 1081T 45411 | BELL 206L1 | | | | ANTENNA 1624820 | FAILED COCKPIT GPS | | 11/10/97 HEEA0011868 |
| ANTENNA WON'T ACQUIRE STATIONS. | | | | | | | | | |
| 5320 HEEA | 6251V 51404 | BELL 206L3 | | | | SHELL ASSY 206033201267 | DEFECTIVE ROOF PANEL | | 11/12/97 HEEA0011963 |
| SHELL ASSY RIVETS WORKING L/H AND R/H SIDE AT AFT END OF ROOF PANEL UNDER TRANSMISSION SUPPORTS. INSTALLED RIVETS USING 890 ADHESIVE CR3242-5. | | | | | | | | | |
| 6240 HEEA | 8587X 51464 | BELL 206L3 | | | | TACH GEN 206076373001 | MALFUNCTION M/R | | 11/18/97 HEEA0012036 |
| TACH GENERATOR SUSPECT CAUSING LOW RPM HORN WHEN TESTING HYDRAULICS. | | | | | | | | | |
| 6240 HEEA | 3116L 51529 | BELL 206L3 | | | | INDICATOR 206075681117 | FAILED ROTOR | | 11/13/97 HEEA0011989 |
| LOW ROTOR AUDIO COMES ON INTERMITTENTLY. | | | | | | | | | |
| 6320 HEEA | 54641 51184 | BELL 206L3 | | | | PUMP 206040190005 | LEAKING TRANSMISSION | | 11/19/97 HEEA0012061 |
| PUMP SEAL LEAKING. | | | | | | | | | |

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| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
|-------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------|---------------------|-----------------------|----------------------|----------------------------------|------------------------|-----------|----------------------------|
| 6330 HEEA | 141BH 51303 | BELL 206L3 | | | | RESTRAINT 206033506103 | WORN M/R XMSN | | 11/13/97 HEEA0012009 |
| TRANSMISSION RESTRAINT WORN BEARINGS. | | | | | | | | | |
| 6330 HEEA | 8588X 51486 | BELL 206L3 | | | | RESTRAINT 206033506101 | WORN TRANSMISSION | | 11/13/97 HEEA0012014 |
| TRANSMISSION RESTRAINT BEARING WORN. | | | | | | | | | |
| 6710 HEEA | 8589X 51487 | BELL 206L3 | | | | ACTUATOR 206062721109 | FAILED M/R | 6306 | 11/18/97 HEEA0012037 |
| 24 VDC ON EXTEND TERMINAL AND 24 VDC ON RETRACT TERMINAL. | | | | | | | | | |
| 6710 HEEA | 3116L 51529 | BELL 206L3 | | | | ACTUATOR 206062721109 | INOPERATIVE M/R | | 11/18/97 HEEA0012034 |
| ACTUATOR INOPERATIVE. | | | | | | | | | |
| 7320 HEEA | 2268V 3605 | BELL 206B3 | ALLSN 250C20 | | | LINEAR ACTUATOR SYLC95481 | FAILED ENGINE | | 11/19/97 HEEA0012043 |
| LINEAR INDICATOR INOPERATIVE. | | | | | | | | | |
| 7330 HEEA | 3116L 51529 | BELL 206L3 | | | | INDICATOR 206075676111 | FAILED FUEL PRESS | | 11/13/97 HEEA0011991 |
| FUEL PRESS LOAD METER INDICATES NO HIGHER THAN 5 PSI. | | | | | | | | | |
| 7712 HEEA | 8589X 51487 | BELL 206L3 | | | | TORQUE INDICATOR 206075739105 | MIS MARKED COCKPIT | 1237 | 11/12/97 HEEA0011945 |
| INDICATOR HAS WRONG RANGE MARKINGS FOR RED LINE. | | | | | | | | | |
| 7714 HEEA | 1078C 45392 | BELL 206L1 | | | | RPM INDICATOR 8DJ81WBS4 | STICKS GAS PRODUCER | | 11/18/97 HEEA0012020 |
| GAS PRODUCER INDICATOR NEEDLE HAS STICKY OPERATION THROUGHOUT SCALE. | | | | | | | | | |
| 7714 HEEA | 54641 51184 | BELL 206L3 | | | | TACH GEN 206062627003 | FLUCTUATING ENGINE | | 11/18/97 HEEA0012035 |
| TACH GENERATOR FLUCTUATING INDICATION. | | | | | | | | | |
| 7722 HEEA | 6251V 51404 | BELL 206L3 | | | | TOT INDICATOR 206375007103 | STICKS COCKPIT | | 11/13/97 HEEA0012010 |
| TOT INDICATOR STICKS. | | | | | | | | | |
| 7722 HEEA | 7074W 52033 | BELL 206L4 | | | | TOT INDICATOR 206375007103 | STICKS COCKPIT | | 11/12/97 HEEA0011974 |
| TOT INDICATOR NEEDLE STICKS. | | | | | | | | | |
| 2370 HEEA | 27805 31106 | BELL 212 | | | | CVR 9806019001 | FAILED COCKPIT | 2436 | 11/13/97 HEEA0011982 |
| CVR WILL NOT TEST. ALSO REMOVED PINGER P/N DK100, S/N DD13473 WITH CVR. REPLACEMENT PINGER S/N S9181 RECEIVED WITH CVR. | | | | | | | | | |

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| 2370 HEEA | 5736J 31140 | BELL 212 | | | | CVR 9806019001 | FAILED COCKPIT | 3430 | 11/13/97 HEEA0011983 |
| CVR WILL NOT TEST. ALSO REMOVED PINGER P/N DK100, S/N DL8982 WITH CVR. REPLACEMENT PINGER S/N S9081 RECEIVED WITH CVR. | | | | | | | | | |
| 2822 HEEA | 27805 31106 | BELL 212 | | | | PUMP 205060606003 | SHORTED FUEL BOOST | | 11/12/97 HEEA0011946 |
| PUMP SHORTED INTERNALLY. POPS BREAKERS. | | | | | | | | | |
| 3442 HEEA | 102PH 30899 | BELL 212 | | | P4001 | INDICATOR MI5852013 | DEFECTIVE COCKPIT | | 11/10/97 HEEA0011870 |
| THE CONTRAST IS NOT BRIGHT ENOUGH TO READ THE SCREEN. THERE IS ONLY ONE COLOR. INSTALLED SERVICEABLE PART. | | | | | | | | | |
| 7250 HEEA | 27805 31106 | BELL 212 | PWA PT6T3B | | | POWER SECTION 3017600 | CRACKED ENGINE | 13831 | 11/13/97 HEEA0012003 |
| 3 INCH CRACK ON TOP OF GAS GENERATOR CASE JUST AFT OF CUSTOMER AIR PORT. | | | | | | | | | |
| 7722 HEEA | 27805 31106 | BELL 212 | | | | ITT INDICATOR 212075067105 | STICKS COCKPIT | | 11/12/97 HEEA0011975 |
| ITT INDICATOR WILL STICK ON 300 ON START SOMETIMES. | | | | | | | | | |
| 7722 HEEA | 5736D 31135 | BELL 212 | | | | TRIM COMPENSATOR 3030083 | FAILED ENGINE | | 11/19/97 HEEA0012054 |
| TRIM COMPENSATOR HAVE INCORRECT READINGS. SENT TO MASCO FOR INSPECTION AND REPAIR. | | | | | | | | | |
| 2430 HEEA | 8045T 28101 | BELL 214ST | | | | RELAY 214175133103 | FAILED DC SYS | | 11/13/97 HEEA0012004 |
| FORWARD START ARM RELAYS WOULD NOT ENERGIZE. | | | | | | | | | |
| 2432 HEEA | 8045T 28101 | BELL 214ST | | | | CHARGER 214175379103 | FAILED BATTERY | | 11/12/97 HEEA0011937 |
| CHARGER WILL NOT CHARGE BATTERY PROPERLY. | | | | | | | | | |
| 2730 HEEA | 6957Y 28139 | BELL 214ST | | | | ACTUATOR ASSY 214001970107 | DEFECTIVE ELEVATOR | | 11/18/97 HEEA0012033 |
| ACTUATOR WILL NOT STAY ON LINE. | | | | | | | | | |
| 2913 HEEA | 6957Y 28139 | BELL 214ST | | | | PUMP 214076033001 | INOPERATIVE HYD SYS | | 11/18/97 HEEA0012030 |
| HYD PUMP INOPERATIVE. | | | | | | | | | |
| 3150 HEEA | 6957Y 28139 | BELL 214ST | | | | PANEL ASSY 214175145103 | DEFECTIVE MASTER CAUTION | | 11/18/97 HEEA0012024 |
| MASTER CAUTION LIGHT ASSEMBLY STICKS. | | | | | | | | | |
| 7100 HEEA | 8045T 28101 | BELL 214ST | | | | PRESSURE SWITCH 4068T96P01 | FAILED ENGINE | | 11/13/97 HEEA0011980 |
| SWITCH INOPERATIVE. | | | | | | | | | |

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| 7100 HEEA | 3897N 28106 | BELL 214ST | | | | PRESSURE SWITCH 4068T96P01 | FAILED ENGINE | | 11/13/97 HEEA0011981 |
| PRESSURE SWITCH WILL NOT TURN LIGHT ON WHEN SYSTEM IS OFF. | | | | | | | | | |
| 6320 HEEA | 230UN 23009 | BELL 230 | | | 222040003119 | SEAL 1223328 | LEAKING M/R GR BOX | | 11/12/97 HEEA0011979 |
| SEAL LEAKING. | | | | | | | | | |
| 2120 HEEA | 21498 36003 | BELL 412 | | | | CONTROLLER 212073927003 | INOPERATIVE AIR DIST | | 11/18/97 HEEA0012025 |
| SERVO CONTROLLER INOPERATIVE. | | | | | | | | | |
| 2160 HEEA | 21498 36003 | BELL 412 | | | | TEMP CONTROL 212073927001 | FAILED CABIN TEMP | | 11/12/97 HEEA0011936 |
| TEMP CONTROL MOTOR RUNNING BUT DRIVE SHAFT NOT TURNING. | | | | | | | | | |
| 2312 HEEA | 2258F 33073 | BELL 412 | | | KTR905 | TRANSCIEVER 064100900 | FAILED COCKPIT VHF | | 11/12/97 HEEA0011969 |
| TRANSCIEVER WEAK AND UNREADABLE, NO TRANSMIT. | | | | | | | | | |
| 2370 HEEA | 107X 33113 | BELL 412 | | | | CVR 9806020023 | FAILED COCKPIT | 22 | 11/12/97 HEEA0011978 |
| CVR TEST LIGHT ON CONSTANTLY. | | | | | | | | | |
| 2422 HEEA | 1202T 33112 | BELL 412 | | | | INVERTER 412075101101 | INOPERATIVE SWITCH | | 11/19/97 HEEA0012057 |
| INVERTER ON/OFF SWITCH INOPERATIVE. TIME SINCE REPAIR 0:00. | | | | | | | | | |
| 2823 HEEA | 108X 33115 | BELL 412 | | | | VALVE 233575 | DEFECTIVE FUEL SYS | | 11/18/97 HEEA0012041 |
| VALVE HARD TO OPEN OR CLOSE. | | | | | | | | | |
| 2823 HEEA | 7128R 36007 | BELL 412 | | | | VALVE L88010501 | FAILED FUEL SOV | | 11/10/97 HEEA0011884 |
| FUEL SOV INOPERATIVE. | | | | | | | | | |
| 2840 HEEA | 141PH 33197 | BELL 412 | | | | SIGNAL COND 473203003 | FAILED FUEL INDICATING | | 11/12/97 HEEA0011935 |
| L/H SIDE FULL GAUGE READS ZERO. | | | | | | | | | |
| 3213 HEEA | 3893N 33010 | BELL 412 | | | | CAP ASSY AFT 412030437103 | DETERIORATED AFT CROSSTUBE | | 11/12/97 HEEA0011952 |
| AFT CAP ASSY DETERIORATED RUBBER. | | | | | | | | | |
| 3340 HEEA | 2149S 36002 | BELL 412 | | | WHELEN | STROBE LIGHT 7028521 | FAILED POWER SUPPLY | | 11/10/97 HEEA0011889 |
| STROBE POWER SUPPLY INOPERATIVE. | | | | | | | | | |

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| 3340 HEEA | 2149S 36002 | BELL 412 | | | WHELEN | STROBE LIGHT 7028521 | FAILED POWER SUPPLY | | 11/10/97 HEEA0011890 |
| | STROBE INOPERATIVE. | | | | | | | | |
| 3416 HEEA | 1202T 33112 | BELL 412 | | | | ALTIMETER 6221205004 | DEFECTIVE COCKPIT | | 11/13/97 HEEA0012006 |
| | ALTIMETER MISSING PH LIGHT. | | | | | | | | |
| 3416 HEEA | 1202T 33112 | BELL 412 | | | | ALTIMETER 1003511424 | DEFECTIVE COCKPIT | | 11/13/97 HEEA0012011 |
| | ALTIMETER HAS EXCESSIVE FRICTION ERROR. | | | | | | | | |
| 3416 HEEA | 21498 36003 | BELL 412 | | | | ALTIMETER 8503S20LW5V | STICKS COCKPIT | | 11/18/97 HEEA0012028 |
| | ALTIMETER STICKS AT 500 FEET THEN JUMPS 300 FEET. DOES SAME AT 1500 FEET. | | | | | | | | |
| 3421 HEEA | 1202T 33112 | BELL 412 | | | | INDICATOR 222375033103 | PRECESSES COCKPIT ATTITUDE | | 11/19/97 HEEA0012044 |
| | ATTITUDE PRECESSES IN AIRCRAFT. | | | | | | | | |
| 3421 HEEA | 108X 33115 | BELL 412 | | | | INDICATOR 222375033103 | PRECESSES COCKPIT ATTITUDE | | 11/18/97 HEEA0012027 |
| | ATTITUDE INDICATOR PRECESSES EXCESSIVELY IN ROLL AXIS. | | | | | | | | |
| 3425 HEEA | 142PH 33150 | BELL 412 | | | | INDICATOR 1113025 | FAILED COCKPIT HSI | | 11/13/97 HEEA0011994 |
| | HSI COURSE SELECTED CHANGES RANDOMLY IN FLIGHT. CHANGES CONSTANT WHEN THE COURSE SELECT SWITCH IN THE AIRCRAFT IS SWITCHED BETWEEN THE PILOT AND COPILOT POSITION. | | | | | | | | |
| 3442 HEEA | 3911L 33023 | BELL 412 | | | P4001 | INDICATOR MI5852013 | FAILED COCKPIT RADAR | | 11/12/97 HEEA0011965 |
| | PILOT REPORTED RADAR IMAGE OCCASSIONALLY DISTORTED AND BROKEN. WHEN UNIT WAS TURNED ON FOR TROUBLESHOOTING, SCREEN WOULD NOT COME ON (STAYED BLANK EVEN AFTER A LONG-UP PERIOD. REPLACED WITH SERVICEABLE PART. | | | | | | | | |
| 3452 HEEA | 22347 36005 | BELL 412 | | | | CONTROL 071119218 | DEFECTIVE TRANSPONDER | | 11/10/97 HEEA0011928 |
| | XPONDER CONTROL LIGHTS DIM FOR DAY USE. PERFORMED PRELIMINARY INSPECTION. FOUND DISPLAY DIM. REPLACED V101 PHOTOCCELL. REPAIRED. BENCH CHECK GOOD. | | | | | | | | |
| 3455 HEEA | 3893N 33010 | BELL 412 | | | | RECEIVER 066104701 | FAILED ADF | | 11/12/97 HEEA0011970 |
| | ADF WILL NOT RECEIVE FOR VERY LONG. | | | | | | | | |
| 5260 HEEA | 293CA 412 | BELL 412 | | | | ACTUATOR 212075418103 | BINDING STEP | | 11/12/97 HEEA0011949 |
| | STEP ACTUATOR BINDS UP AND POPS CIRCUIT BREAKER. | | | | | | | | |
| 5260 HEEA | 108X 33115 | BELL 412 | | | | ACTUATOR SYLC502283 | INOPERATIVE STEP | | 11/12/97 HEEA0011950 |
| | STEP ACTUATOR INOPERATIVE. | | | | | | | | |

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| 6240 HEEA | 2298Z 33077 | BELL 412 | | | | INDICATOR 412075010111 | FAILED TRIPLE TACH | | 11/13/97 HEEA0011993 |
| ROTOR NEEDLE READS HIGH. | | | | | | | | | |
| 6320 HEEA | HL923 33150 | BELL 412 | | | | CASE ASSY 204040386001 | CORRODED XMSN | | 11/12/97 HEEA0011951 |
| XMSN CASE ASSY CORROSION ON TOP FLANGE AND PILOT DIAMETER WORN. | | | | | | | | | |
| 6410 HEEA | 21498 36003 | BELL 412 | | | | BLADE 212010750105 | DEFECTIVE END CAP SKIN | 2214 | 11/12/97 HEEA0011971 |
| BLADE SKIN LIFTED AT END CAP AND VOID ON END CAP. | | | | | | | | | |
| 6710 HEEA | 2014K 33020 | BELL 412 | | | | SERVO ASSY 412001304101 | STUCK M/R | | 11/13/97 HEEA0011996 |
| NR2 ACTUATOR STUCK HARD OVER. | | | | | | | | | |
| 6710 HEEA | 2261D 33076 | BELL 412 | | | | LINEAR ACTUATOR 204060762005 | WORN M/R | | 11/18/97 HEEA0012029 |
| LINEAR ACTUATOR SHAFT WORN. | | | | | | | | | |
| 6710 HEEA | 1202T 33112 | BELL 412 | | | | ACTUATOR ROTARY 214001347005 | DEFECTIVE M/R | | 11/12/97 HEEA0011934 |
| ROTARY ACTUATOR BRAKE WILL NOT RELEASE PROPERLY. | | | | | | | | | |
| 6710 HEEA | 2149S 36002 | BELL 412 | | | | ACTUATOR 206062721109 | INOPERATIVE M/R | | 11/12/97 HEEA0011947 |
| ACTUATOR INOPERATIVE. | | | | | | | | | |
| 7160 HEEA | 2261D 33076 | BELL 412 | | | | ACTUATOR 209062214001 | CORRODED ENG INLET | | 11/12/97 HEEA0011948 |
| ACTUATOR CANNON PLUG CORRODED. WIRE TOO SHORT TO REPLACE CANNON PLUG. | | | | | | | | | |
| 7210 HEEA | 5759N 33002 | BELL 412 | | | | POWER SEC 3017600 | FAILED ENGINE | 9333 | 11/10/97 HEEA0011876 |
| OIL PUMP BOLT THREADS STRIPPED OUT OF GEARBOX AND EXCESSIVE CHAFING ON GEARBOX. | | | | | | | | | |
| 7210 HEEA | 3893P 33012 | BELL 412 | PWA PT6T3B | | | COMBINING GR BOX 3024780 | FAILED ENGINE | 15964 | 11/13/97 HEEA0011984 |
| NOISE IN NR1 SIDE OF GEARBOX. | | | | | | | | | |
| 7210 HEEA | 6559Z 36019 | BELL 412 | PWA PT6T3B | | | COMBINING GR BOX 3024780 | MAKING METAL ENGINE | 14154 | 11/13/97 HEEA0012002 |
| COMBINING GR BOX HAS METAL ON PLUGS AND FILTER AFTER 30 MINUTES RUN AND 20 MINUTES FLIGHT. | | | | | | | | | |
| 7261 HEEA | 3911L 33023 | BELL 412 | ALLSN 250C47B | | | HOUSING ASSY 3026669 | MISMANUFACTURED ENG OIL | 80 | 11/12/97 HEEA0011977 |
| MISMANUFACTURED, SEAT FOR RELIEF VALVE NOT FINISHED. OIL PRESSURE SLOW TO COME UP AND LOW AT 100%. REMOVED FROM ENGINE S/N CPPS-TB0040 AT ENGINE TOTAL TIME 80:00. REPLACEMENT HOUSING AND BUILD UP PARTS WERE RECEIVED AGAINST OUR RO#8077 AND SO#S:600971 AND 00032722, INVOICE 546987, 547438, 547665 AND 548081. | | | | | | | | | |

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| 7712 HEEA | 108X 33115 | BELL 412 | | | | INDICATOR 412075008111 | STICKS ENG TORQ | | 11/18/97 HEEA0012040 |
| TORQUE INDICATOR NR2 NEEDLE STICKS AFTER ONE HOUR USE. TIME SINCE REPAIR 217:05. | | | | | | | | | |
| 7712 HEEA | 7128R 36007 | BELL 412 | | | | TRANSMITTER 412075205101 | FAILED ENG TORQUE | | 11/13/97 HEEA0012001 |
| TORQUE TRANSMITTER STICKING. TRANSMITS LOW OUT OF TOLERANCE. | | | | | | | | | |
| 7714 HEEA | 2149S 36002 | BELL 412 | | | | INDICATOR 212075037101 | STICKS ENG N1 | | 11/13/97 HEEA0012000 |
| N1 INDICATOR NEEDLE STICKS THROUGHOUT SCALE, NO LIGHTING. | | | | | | | | | |
| 7722 HEEA | 107X 33113 | BELL 412 | | | | ITT INDICATOR 212075067105 | FAILED COCKPIT | | 11/13/97 HEEA0011998 |
| ITT INDICATOR NEEDLE DROPPED TO ZERO. | | | | | | | | | |
| 7722 HEEA | 22347 36005 | BELL 412 | | | | ITT INDICATOR 212075067105 | STUCK COCKPIT | | 11/13/97 HEEA0011997 |
| ITT INDICATOR NEEDLE STICKS ON START. | | | | | | | | | |
| 7810 HEEA | 22608 33075 | BELL 412 | | | | DUCT ASSY 212061202010 | CRACKED RT EXH | | 11/13/97 HEEA0012012 |
| EJECTORS ARE CRACKED. | | | | | | | | | |
| 7810 HEEA | 22608 33075 | BELL 412 | | | | DUCT ASSY 212061202009 | CRTACKED LT EXH | | 11/13/97 HEEA0012013 |
| EJECTORS ARE CRACKED. | | | | | | | | | |
| 7810 HEEA | 21498 36003 | BELL 412 | | | | EJECTOR ASSY 212061201012 | BROKEN RT MOUNT | | 11/13/97 HEEA0012015 |
| EJECTOR ASSY MOUNT BRACKETS BROKEN. | | | | | | | | | |
| 7931 HEEA | 108X 33115 | BELL 412 | | | | INDICATOR 209070262101 | FAILED ENG OIL PRESS | | 11/13/97 HEEA0011990 |
| ENG OIL TEMP/PRESS READS LOW OIL PRESSURE. | | | | | | | | | |
| 7320 CHIR | P2CHD 2003 | BOEING 1072 | GE CT581401 | | | ACTUATOR ACL102 | MALFUNCTIONED NR 1 ENGINE | 1324 | 10/7/97 97ZZZX4865 |
| ENGINE WOULD BEEP UP, BUT NOT DOWN. EMERG SYS WORKED AS REQUIRED. FOUND THE SYS WOULD APPEAR TO WORK NORMALLY ON THE GROUND, BUT WOULD FAIL DURING RAPID CLTV INPUTS. EVEN THE EMERGENCY SYSTEM FAILED TO BREAK IT FREE. TAPPING THE UNIT WITH A SCREW DRIVER 'BROKE' THE SYSTEM FREE ALLOWING 'NORMAL' OPS. REPLACED THE ACTUATOR. RESUMED OPERATIONS. TROUBLESHOOTING FOUND THE ACTUATOR WAS 'SLOW' AND NOTICEABLY QUIETER THAN THE NORMALLY OPERATING NR 2 ENG ACTUATOR. INSTALLED ACTUATOR S/N 038; TT NEW. THIS UNIT AT FIRST APPEARED TO WORK ALSO. THEN IT TOO WOULD FAIL UNDER CLTV INPUT, QUIET AND SLOW. | | | | | | | | | |
| 2312 HEEA | 911PF S718 | BOLKMS BO105S | | | RT40 | TRANSCIEVER 40001278500 | INTERMITTENT COCKPIT VHF | | 11/10/97 HEEA0011864 |
| RT40 TRANSCIEVER VERY INTERMITTENT RECEIVE. | | | | | | | | | |
| 2562 HEEA | 911FL S717 | BOLKMS BO105S | | | NARCO | ELT ELT1104 | WEAK COCKPIT | | 11/12/97 HEEA0011944 |
| ELT HAS WEAK SIGNAL. | | | | | | | | | |

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

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| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
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| 2844 HEEA | | BOLKMS BO105S | | | | INDICATOR 4021001 | STICKS DUAL FUEL PRESS | | 11/12/97 HEEA0011933 |
| DUAL FUEL PRESSURE NR2 NEEDLE STICKS INTERMITTENTLY. | | | | | | | | | |
| 2844 HEEA | | BOLKMS BO105S | | | | INDICATOR 4021001 | STICKS DUAL FUEL PRESS | | 11/12/97 HEEA0011932 |
| DUAL FUEL PRESSURE NR2 NEEDLE STICKS AT ZERO INTERMITTENTLY. | | | | | | | | | |
| 2844 HEEA | 91070 S145 | BOLKMS BO105S | | | | TRANSDUCER BSE206150G3 | FAILED FUEL PRESS | | 11/12/97 HEEA0011956 |
| TRANSDUCER NO PRESSURE INDICATION. CAUSES THE GAUGE TO PEG TO ZERO SIDE ALL THREE PRESSURE BOTH ENGINES AND TRANS. INDICATOR ON SAME GAUGE. | | | | | | | | | |
| 2844 HEEA | 91070 S145 | BOLKMS BO105S | | | | TRANSDUCER BSE206150G3 | FAILED FUEL PRESS | | 11/12/97 HEEA0011955 |
| TRANSDUCER HAS NO PRESSURE INDICATION. | | | | | | | | | |
| 2844 HEEA | 4573B S673 | BOLKMS BO105S | | | | TRANSDUCER BSE20660G1 | DEFECTIVE FUEL PRESS | | 11/10/97 HEEA0011882 |
| FUEL PRESSURE INDICATES LOW OUT OF TOLERANCE. | | | | | | | | | |
| 2844 HEEA | 4573B S673 | BOLKMS BO105S | | | | TRANSDUCER BSE206150G3 | FAILED FUEL PRESS | | 11/10/97 HEEA0011883 |
| INDICATES LOW OUT OF TOLERANCE. | | | | | | | | | |
| 3416 HEEA | 50293 S677 | BOLKMS BO105S | | | ACK | ENCODER A30 | FAILED COCKPIT | | 11/10/97 HEEA0011886 |
| ALTITUDE ENCODER NO VALID OUTPUT. | | | | | | | | | |
| 3421 HEEA | 81992 S827 | BOLKMS BO105S | | | | INDICATOR 5040017901 | INOPERATIVE COCKPIT ATTITUDE | | 11/12/97 HEEA0011959 |
| ATTITUDE INDICATOR INOPERATIVE. | | | | | | | | | |
| 3457 HEEA | 135AE S838 | BOLKMS BO105S | | | GARMIN INT | GPS 150 0110005400 | FAILED COCKPIT | | 11/12/97 HEEA0011972 |
| GPS INTERNAL BATTERY DEAD. | | | | | | | | | |
| 5320 HEEA | 624MB S751 | BOLKMS BO105S | | | | FLOOR PLATE 10522341 | CORRODED FUSELAGE | | 11/10/97 HEEA0011875 |
| FLOOR PLATE CORRODED AND SEPARATED BEYOND REPAIR. | | | | | | | | | |
| 6230 HEEA | 205UC S668 | BOLKMS BO105S | | | 4638001004 | MAST 4638205005 | CRACKED ROTOR | 3885 | 11/12/97 HEEA0011966 |
| MAST FOUND TO BE CRACKED AT WEBBING BETWEEN BOLT HOLES. REPLACED WITH SERVICEABLE MAST. | | | | | | | | | |
| 6240 HEEA | 9190Y S669 | BOLKMS BO105S | | | | INDICATOR 10594564 | FAILED MAST MOMENT | | 11/19/97 HEEA0012046 |
| MAST MOMENT INDICATOR BLOWS FUSES. | | | | | | | | | |

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DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

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| 6410 HEEA | 5031U S678 | BOLKMS BO105S | | | | BLADE 10531791 | DEFECTIVE T/R | 1178 | 11/13/97 HEEA0012008 |
| T/R BLADE S/N 151 HAS RUBBER COATING PEELING AT BLADE TIP AND S/N 165 SENT FOR BALANCING PURPOSES. | | | | | | | | | |
| 6520 HEEA | 818SH S753 | BOLKMS BO105S | | | | CHIP DETECTOR B4717 | SHORTED T/R GR BOX | | 11/12/97 HEEA0011958 |
| CHIP DETECTOR SHORTED LIGHT COMES ON WHEN INSTALLED. | | | | | | | | | |
| 6520 HEEA | 81832 S828 | BOLKMS BO105S | | | | GEAR BOX 4619002003 | FAILED T/R INTERMED | 4974 | 11/13/97 HEEA0011985 |
| INTERMEDIATE GR BOX MAKING METAL. | | | | | | | | | |
| 7310 HEEA | 3533T S111 | BOLKMS BO105S | ALLSN 250C20B | | | CONNECTING PIECE 10561320 | LEAKING FUEL SYS | | 10/22/97 HEEA0011718 |
| LEAKING FROM SWEDGED RING AT "B" NUT. | | | | | | | | | |
| 7712 HEEA | 9190Y S669 | BOLKMS BO105S | | | | TRANSMITTER 10594575 | FAILED ENGINE | | 11/19/97 HEEA0012045 |
| TORQUE TRANSMITTER BLOWS FUSES. | | | | | | | | | |
| 7714 HEEA | 5031U S678 | BOLKMS BO105S | | | | TACH INDICATOR DL41239 | ERRATIC COCKPIT | | 11/12/97 HEEA0011943 |
| INDICATOR ERRATIC OPERATION AT LOW RPMS. | | | | | | | | | |
| 7714 HEEA | 911HM S683 | BOLKMS BO105S | | | | TACH INDICATOR DL40438 | FAILED COCKPIT | | 11/19/97 HEEA0012047 |
| TRIPLE TACH INDICATOR ALL NEEDLES STICKING DURING OPERATION. | | | | | | | | | |
| 7722 HEEA | 624MB S751 | BOLKMS BO105S | | | | TOT INDICATOR 50061051 | FAILED COCKPIT | | 11/12/97 HEEA0011942 |
| EXCESSIVE FRICTION ERROR. SENT TO MASCO FOR INSPECTION AND REPAIR. | | | | | | | | | |
| 7722 HEEA | 4302G S853 | BOLKMS BO105S | | | | TOT INDICATOR 10590947 | ERROR COCKPIT | | 11/10/97 HEEA0011877 |
| TOT INDICATOR NEEDLE HAS EXCESSIVE FRICITON ERROR. | | | | | | | | | |
| 7930 HEEA | 4573L S683 | BOLKMS BO105C | | | | OIL INDICATOR 4011001 | FLUCTUATES COCKPIT | | 11/10/97 HEEA0011871 |
| NR2 NEEDLE FLUCTUATES AND INTERMITTENTLY STICKS. | | | | | | | | | |
| 7930 HEEA | | BOLKMS BO105S | | | | OIL INDICATOR 4011001 | STICKS COCKPIT | | 11/10/97 HEEA0011873 |
| NR2 NEEDLE STICKS. | | | | | | | | | |
| 7930 HEEA | | BOLKMS BO105S | | | | OIL INDICATOR 4011001 | DEFECTIVE COCKPIT | | 11/12/97 HEEA0011931 |
| TRIPLE OIL INDICATOR NR1 NEEDLE READS LOW. | | | | | | | | | |

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| 7930 HEEA | | BOLKMS BO105S | | | | OIL INDICATOR 4011001 | DEFECTIVE COCKPIT | | 11/12/97 HEEA0011930 |
| | | OIL INDICATOR CRACKED LENS. | | | | | | | |
| 7930 HEEA | | BOLKMS BO105S | | | | OIL INDICATOR 4011001 | DEFECTIVE COCKPIT | | 11/12/97 HEEA0011929 |
| | | TRIPLE OIL INDICATOR NEEDLE NR1 AND NR2 INDICATES LOW OUT OF TOLERANCE. | | | | | | | |
| 7930 HEEA | | BOLKMS BO105S | | | | OIL INDICATOR 4011001 | STICKS COCKPIT | | 11/10/97 HEEA0011874 |
| | | TRIPLE OIL INDICATOR NR1 NEEDLE STICKS. | | | | | | | |
| 7930 HEEA | 6607K S841 | BOLKMS BO105S | | | | OIL INDICATOR 4011001 | STICKS COCKPIT | | 11/10/97 HEEA0011872 |
| | | TRIPLE OIL INDICATOR NR1 NEEDLE STICKS AT HIGH END. | | | | | | | |
| 2210 HEEA | 134AE 7237 | BOLKMS BK117B2 | | | | CONTROL UNIT 117884141 | FAILED COCKPIT | | 11/13/97 HEEA0011995 |
| | | CONTROL UNIT DROPPED OFF LINE SEVERAL TIMES, WOULD NOT COME ON ONE TIME. | | | | | | | |
| 2312 HEEA | 401PH 7050 | BOLKMS BK117A3 | | | | TRANSCIVER 4000102002 | FAILED COCKPIT | | 11/10/97 HEEA0011863 |
| | | RT138 PIN ON FRONT CONNECTOR BROKEN. POPS CIRCUIT BREAKER. | | | | | | | |
| 2312 HEEA | 401PH 7050 | BOLKMS BK117A3 | | | RT138F | TRANSCIVER 40001452502 | FAILED COCKPIT | | 11/10/97 HEEA0011859 |
| | | TRANSCIVER WILL NOT TRANSMIT. FOUND VR3 VOLTAGE REGULATOR ON VCO CONTROL BOARD INOPERATIVE. REPLACED VOLTAGE REGULATOR. REPAIRED UNIT. BENCH CHECK GOOD. | | | | | | | |
| 3452 HEEA | 911LK 7068 | BOLKMS BK117B2 | | | KT76 | TRANSPONDER 066106200 | FAILED COCKPIT | | 11/10/97 HEEA0011858 |
| | | TRANSPONDER WILL NOT IDENT. REPLACED CAVITY OSCILLATOR V01. REPAIRED. INSTALLED CAP PLUGS. ADJUSTED FREQUENCY. BENCH CHECK GOOD. | | | | | | | |
| 6720 HEEA | 217UC 7152 | BOLKMS BK117B1 | | | | ACTUATOR 741C000005 | LEAKING TAIL ROTOR | | 11/19/97 HEEA0012058 |
| | | T/R ACTUATOR LEAKING. | | | | | | | |
| 6730 HEEA | 217UC 7152 | BOLKMS BK117B1 | | | | ACTUATOR 741C000005 | FAILED T/R | | 11/13/97 HEEA0011992 |
| | | T/R ACTUATOR KICKS IN CRUISE (CHATTERS). | | | | | | | |
| 5210 | 831FG 830511S | HUGHES 369HS | | | | DOOR 90210001 | DEPARTED CABIN RT MAIN | | 10/3/97 97ZZZX4860 |
| ***** | DURING FLIGHT, THE RIGHT MAIN DOOR OPENED, THEN DEPARTED THE AIRCRAFT. THE DOOR HINGES WERE MODIFIED BY THE INSTALLATION OF QUICK REMOVAL DOOR HINGES STC SH2530 NM. DISCOVERED DURING INSPECTION THAT THE LATCHING FEATURE USED WAS NOT PROPERLY ENGAGED ALLOWING THE DOOR TO DEPART THE HELICOPTER. SUBMITTER STATED THE STC DOES NOT CONTAIN PRE-FLIGHT INFORMATION FOR THE PILOT TO FOLLOW. THE STC NEEDS TO BE REVISED TO INCORPORATE PILOT INFO. | | | | | | | | |

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DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

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| 6320 HEAA ***** | 161KA A940016 | KAMAN K1200 | | | KAMAN K974002101 | OIL PUMP K974120107 | SEIZED M/R TRANSMISSION | 1687 | 11/6/97 97ZZZX4858 |
| OIL PUMP SEIZED ON START-UP. NO SHEAR SHAFT WAS INCORPORATED IN OIL PUMP. SEIZURE CAUSED DAMAGE TO PUMP DRIVE RING GEAR TEETH INSIDE TRANSMISSION ASSY AS WELL AS OIL PUMP ASSY. IF SHEAR SHAFT WAS INCORPORATED IN OIL PUMP, ONLY PUMP WOULD HAVE NEEDED CHARGING IN THIS CASE, NOT PUMP AND TRANSMISSION. | | | | | | | | | |
| 6320 HEAA | 161KA A940016 | KAMAN K1200 | | | KAMAN K974120101 | OIL PUMP K974120101 | DAMAGED M/R | 1687 | 11/6/97 97ZZZX4859 |
| OIL PUMP SEIZED ON START-UP. NO SHEAR SHAFT WAS INCORPORATED IN OIL PUMP. SEIZURE CAUSED DAMAGE TO PUMP DRIVE RING GEAR TEETH INSIDE TRANSMISSION ASSY AS WELL AS OIL PUMP ASSY. IF SHEAR SHAFT WAS INCORPORATED IN OIL PUMP, ONLY PUMP WOULD HAVE NEEDED CHARGING IN THIS CASE, NOT PUMP AND TRANSMISSION. | | | | | | | | | |
| 7120 JYDR | | SKRSKY S64A | | | | STABILIZER RING 698609 | CRACKED RING TO FLANGE | | 11/5/97 97ZZZX4837 |
| STABILIZER RING ATTACHES THE REAR SUPPORT SYSTEM TO THE FREE TURBINE ASSEMBLY. IT IS NOT AN ENGINE MOUNT BUT A DAMPER MOUNT. THIS PART WAS FOUND CRACKED AT ONE OF THE RING TO FLANGE TRANSITION POINTS. THE CRACK GOES FROM ONE SIDE OF THE RING TO THE OTHER, AND EXTENDS APPROXIMATELY 0.500 INCH ON EACH SIDE. THIS DEFECT WAS FOUND DURING FLUORESCENT PENETRANT INSPECTION (FPI). PART DOES NOT HAVE A FINITE LIFE. THE CRACK WAS DETECTED VISUALLY. | | | | | | | | | |
| 2210 HEEA | 1547D 760077 | SKRSKY S76A | | | | YAW INDICATOR 7690001804103 | MALFUNCTION ROLL-PITCH | | 11/19/97 HEEA0012059 |
| YAW KICKING IN ROLL AND PITCH AFTER ONE HOUR OF FLIGHT. | | | | | | | | | |
| 2430 HEEA | 911MJ 760231 | SKRSKY S76A | | | | EMERGENCY POWER 6013211 | FAILED DC SYS | | 11/13/97 HEEA0012005 |
| EMERGENCY POWER BATTERY INTERNAL FAILURE. | | | | | | | | | |
| 2820 HEEA | 31217 760229 | SKRSKY S76A | | | | VALVE 6531703006109 | DEFECTIVE FUEL SYS | | 11/19/97 HEEA0012060 |
| NR1 ENGINE STALLING. | | | | | | | | | |
| 2841 HEEA | 31217 760229 | SKRSKY S76A | | | | INDICATOR 7645001078103 | STICKS FUEL QTY | | 11/18/97 HEEA0012021 |
| FUEL QTY NR2 NEEDLE STICKS IN MOVEMENT. | | | | | | | | | |
| 3040 HEEA | 4253S 760035 | SKRSKY S76A | | | | CONVERTER 9001421 | BINDING WIPER ASSY | | 10/9/97 HEEA0011397 |
| WIPER ASSY CONVERTER BINDING. | | | | | | | | | |
| 3150 HEEA | 31219 760230 | SKRSKY S76A | | | | CAUTION PANEL 7655001001103 | MALFUNCTIONED COCKPIT | | 11/12/97 HEEA0011953 |
| MASTER CAUTION LIGHT STAYS ON VERY LOW. | | | | | | | | | |
| 3414 HEEA | 1547D 760077 | SKRSKY S76A | | | | INDICATOR 2002011293 | FAILED AIR SPEED | | 11/18/97 HEEA0012022 |
| SLOW TO COME UP ON SPEED. SENT TO MASCO FOR INSPECTION AND REPAIR. | | | | | | | | | |
| 3421 HEEA | 1547D 760077 | SKRSKY S76A | | | | GYRO 7660002113102 | MALFUNCTION COCKPIT VG | | 11/18/97 HEEA0012026 |
| AFTER ONE HOUR OF FLIGHT TIME NR1 PITCH KICKS. | | | | | | | | | |

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DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS (cont'd)

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| 6220 HEEA | 5426U 760167 | SKRSKY S76A | | | | DAMPENER 7610608000049 | WORN M/R | | 11/18/97 HEEA0012039 |
| DAMPENER INNER BUSHING CAVITY OVERSIZED. | | | | | | | | | |
| 6220 HEEA | 792CH 760193 | SKRSKY S76A | | | | DAMPENER 7610608000050 | WORN M/R | | 11/18/97 HEEA0012038 |
| WEAR SPOTS ON INSIDE CYCLE WALL. | | | | | | | | | |
| 6310 HEEA | 5426U 760167 | SKRSKY S76A | | | | OUTPUT FLANGE 7636109103104 | SHEARED ENGINE | | 11/12/97 HEEA0011954 |
| ENG OUTPUT SHAFT SHEARED AT THREADS. SCRAPPED PART. | | | | | | | | | |
| 6320 HEEA | | SKRSKY S76A | | | | TUBE 7635109150103 | PITTED GR BOX | | 11/19/97 HEEA0012055 |
| GR BOX TUBE SEAL RIDE PITTED. | | | | | | | | | |
| 6321 HEEA | 31219 760230 | SKRSKY S76A | | | | MODULE 7665009803105 | INOPERATIVE ROTOR BRAKE | | 11/18/97 HEEA0012032 |
| ROTOR BRAKE LIGHT INOPERATIVE. | | | | | | | | | |
| 6410 HEEA | 4253S 760035 | SKRSKY S76A | | | | BLADE 7610105101041 | VOID T/R | 5653 | 11/10/97 HEEA0011856 |
| VOID OVER THE T/R BLADE TIP WEIGHT CHAMBER ON PADDLE "A". | | | | | | | | | |
| 7810 HEEA | 3122H 760233 | SKRSKY S76A | | | | EJECTOR 7630507003044 | CRACKED EXHAUST | | 11/13/97 HEEA0011999 |
| EJECTOR CRACKED UPPER AIRCRAFT OUTLET. | | | | | | | | | |
| 2312 HEEA | 60951 2771 | SNIAS AS350B2 | | | KY196 | TRANSCIEVER 064101902 | FAILED COCKPIT | | 11/10/97 HEEA0011860 |
| VHF TRANSCIEVER WILL NOT TRANSMIT IN FLIGHT. FOUND POWER OUT TO BE 3 WATTS BELOW SPECS. REPLACED CAPACITOR C623. REPAIRED. ADJUSTED SQUELCH AND SIDETONE. BENCH CHECK GOOD. | | | | | | | | | |
| 5210 HEEA | 6097Z 2820 | SNIAS AS350B2 | | | | CYLINDER LOCK 350A25152000 | BROKEN DOOR | 3314 | 10/14/97 HEEA0011470 |
| CYL LOCK BROKEN ROD ATTACH POINT. | | | | | | | | | |
| 6220 HEEA | 60951 2771 | SNIAS AS350B | | | | SCREW 350A37124420 | BROKEN ROTOR HEAD | 793 | 11/12/97 HEEA0011967 |
| BROKEN IN SMALLER THREADS AT THE END OF THIS BOLT. REPLACED WITH NEW BOLT. | | | | | | | | | |
| 7200 HEEA | 6095S 2777 | SNIAS AS350B2 | | | | ENGINE 0292005220 | FAILED OIL SYS | 3039 | 11/12/97 HEEA0011973 |
| ENGINE HAS LOW OIL PRESSURE AND LOWER POWER. REPLACED WITH SERVICEABLE ENGINE. | | | | | | | | | |

(End of DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS)

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - ENGINES**11/23/97 - 11/29/97 ISSUE: 97-48 ZAC-327**

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| 7240 | 400AC | BEECH | GARRTT | | | PLENUM | FAILED | 9187 | 11/4/97 |
| | BE12 | B100 | TPE3316 | | | | RT ENG | 850 | 97ZZZX4851 |
| ***** | ENG FAILURE AT T/O. CREW HEARD A LOUD POP, THE RT ENG ITT TEMP ROSE AND FLAMES FROM THE RT ENG. UNABLE TO KILL THE ENG USING THE EMERG CUTOFF LEVER, LEVER WAS JAMMED. THE ENG WAS SHUT DOWN USING THE FIREWALL SOV. FIRE BOTTLE WAS DISCHARGED AND FIRE WAS PUT OUT. THE LEFT ENG SECURED AND ACFT EVAC. INSP REVEALED THAT THE PLENUM CASE BROKE OPEN RADIALY TOWARD THE TOP OF THE ENG. THE OPENED PART WAS JAMMED BEHIND THE EMERG CUTOFF LEVER RENDERING IT INOP. INSP OF THE PLENUM CASE SUGGESTS THAT A CRACK BEGAN AT THE POINT WHERE THE WELDS OF BLEED AIR, AND THE P3 BOSSES COME TOGETHER. THE CRACK PROGRESSED TO WHERE THE PLENUM FAILED IN SUCH A WAY THAT THE SHEET METAL RIPPED OPEN TOTAL IS 24 INCHES. | | | | | | | | |
| 7314 | 701NC | BEECH | PWA | | | PUMP | FAILED | 4878 | 11/3/97 |
| | LA55 | F90 | PT6A135 | | | 0253231013 | LT ENG FUEL | 1577 | 97ZZZX4850 |
| | LEFT ENGINE HIGH PRESSURE FUEL PUMP FAILED. DISASSEMBLY REVEALED DRIVE COUPLER SPLINES WORN OUT ON PUMP. OIL MISTING HOLE PLUGGED, SPLINES RUNNING DRY. THIS CONDITION CAN BE REVEALED BY PUSHING A PIPE CLEANER INTO PUMP DRAIN CAVITY. RUST DEPOSITS INDICATE LACK OF LUBRICATION TO DRIVE COUPLER. RECOMMEND PERIODIC INSPECTION OF PUMP DRAINS FOR THIS CONDITION. | | | | | | | | |
| 7320 | 2268V | BELL | ALLSN | | | LINEAR ACTUATOR | FAILED | | 11/19/97 |
| HEEA | 3605 | 206B3 | 250C20 | | | SYLC95481 | ENGINE | | HEEA0012043 |
| | LINEAR INDICATOR INOPERATIVE. | | | | | | | | |
| 7250 | 27805 | BELL | PWA | | | POWER SECTION | CRACKED | 13831 | 11/13/97 |
| HEEA | 31106 | 212 | PT6T3B | | | 3017600 | ENGINE | | HEEA0012003 |
| | 3 INCH CRACK ON TOP OF GAS GENERATOR CASE JUST AFT OF CUSTOMER AIR PORT. | | | | | | | | |
| 7210 | 5759N | BELL | | | | POWER SEC | FAILED | 9333 | 11/10/97 |
| HEEA | 33002 | 412 | | | | 3017600 | ENGINE | | HEEA0011876 |
| | OIL PUMP BOLT THREADS STRIPPED OUT OF GEARBOX AND EXCESSIVE CHAFING ON GEARBOX. | | | | | | | | |
| 7210 | 3893P | BELL | PWA | | | COMBINING GR BOX | FAILED | 15964 | 11/13/97 |
| HEEA | 33012 | 412 | PT6T3B | | | 3024780 | ENGINE | | HEEA0011984 |
| | NOISE IN NR1 SIDE OF GEARBOX. | | | | | | | | |
| 7210 | 6559Z | BELL | PWA | | | COMBINING GR BOX | MAKING METAL | 14154 | 11/13/97 |
| HEEA | 36019 | 412 | PT6T3B | | | 3024780 | ENGINE | | HEEA0012002 |
| | COMBINING GR BOX HAS METAL ON PLUGS AND FILTER AFTER 30 MINUTES RUN AND 20 MINUTES FLIGHT. | | | | | | | | |
| 7261 | 3911L | BELL | ALLSN | | | HOUSING ASSY | MISMANUFACTURED | 80 | 11/12/97 |
| HEEA | 33023 | 412 | 250C47B | | | 3026669 | ENG OIL | | HEEA0011977 |
| | MISMANUFACTURED, SEAT FOR RELIEF VALVE NOT FINISHED. OIL PRESSURE SLOW TO COME UP AND LOW AT 100%. REMOVED FROM ENGINE S/N CPPS-TB0040 AT ENGINE TOTAL TIME 80:00. REPLACEMENT HOUSING AND BUILD UP PARTS WERE RECEIVED AGAINST OUR RO#8077 AND SO#S:600971 AND 00032722, INVOICE 546987, 547438, 547665 AND 548081. | | | | | | | | |
| 7310 | 3533T | BOLKMS | ALLSN | | | CONNECTING PIECE | LEAKING | | 10/22/97 |
| HEEA | S111 | BO105S | 250C20B | | | 10561320 | FUEL SYS | | HEEA0011718 |
| | LEAKING FROM SWEDGED RING AT "B" NUT. | | | | | | | | |
| 7322 | 118BH | CESSNA | CONT | | | FUEL METERING | OBSTRUCTED | | 10/28/97 |
| | 340A0003 | 340A | TSIO520NB | | | 63291611 | ENGINE FUEL | 183 | 97ZZZX4842 |
| | PILOT NOTED REDUCED FUEL FLOW AND SOME POWER LOSS ON CLIMB-OUT. RETURNED TO AIRPORT. INVESTIGATION FOUND .3750 INCH LONG BY .1250 INCH WIDE PIECE OF FERROUS MATERIAL LODGED IN FUEL METERING UNIT DOWNSTREAM OF INLET SCREEN RESTRICTING FUEL FLOW. OBJECT SENT TO TCM ANALYZATION LAB. SOURCE OF OBJECT DETERMINED TO HAVE ORIGINATED FROM CLEANING BATH POROUS MEDIA. | | | | | | | | |

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - ENGINES (cont'd)

11/23/97 To 11/29/97 ISSUE: 97-48 ZAC-327

| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
|--------------------------------------------------------------------------------|----------------------|-------------------------|---------------------|-----------------------|----------------------|--------------------------|------------------------|-----------|----------------------------|
| 7200 | 6095S | SNIAS | | | | ENGINE | FAILED | 3039 | 11/12/97 |
| HEEA | 2777 | AS350B2 | | | | 0292005220 | OIL SYS | | HEEA0011973 |
| ENGINE HAS LOW OIL PRESSURE AND LOWER POWER. REPLACED WITH SERVICEABLE ENGINE. | | | | | | | | | |

(End of DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - ENGINES)

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS**11/23/97 - 11/29/97 ISSUE: 97-48 ZAC-327**

| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
|------------------------------------------------------------------------------------------------------|------------------------------|---------------------------------|-----------------------------|-------------------------------|------------------------------|----------------------------------|--------------------------------|-------------------|------------------------------------|
| 2211 HEEA | 789DS BB478 | BEECH 200BEECH | | | | COMPUTER 4008519916 | DEFECTIVE AUTO FLIGHT | | 11/19/97 HEEA0012056 |
| COMPUTER OSCILLATES IN ROLL. | | | | | | | | | |
| 3451 HEEA | 500PH BL29 | BEECH 200CBEECH | | | DME40 | DME INDICATOR 6221233001 | DEFECTIVE COCKPIT | | 11/10/97 HEEA0011885 |
| DME INDICATOR FLASHES INTERMITTENTLY. | | | | | | | | | |
| 6113 | | BEECH 95B55 | | HARTZL BHCC2YF2 | | BULKHEAD 22835 | CRACKED HUB | 3932 | 2/1/96 EY2R9600019 |
| BULKHEAD CRACKED IN HUB BOLT HOLES | | | | | | | | | |
| 2312 HEEA | 6748D 51106 | BELL 206L3 | | | KFS594 | CONTROL 071012740004 | DEFECTIVE COCKPIT | | 11/12/97 HEEA0011968 |
| KFS594 CONTROL HAS NO DISPLAY. | | | | | | | | | |
| 3416 HEEA | 2268G 3603 | BELL 206B3 | | | ACK | ENCODER A30 | FAILED COCKPIT | | 11/13/97 HEEA0012019 |
| ENCODER NO ALTITUDE OUTPUT. CALIBRATE TO 28 VDC. | | | | | | | | | |
| 3416 HEEA | 27702 45300 | BELL 206L1 | | | ACK | ENCODER A30 | FAILED COCKPIT | | 11/10/97 HEEA0011888 |
| ENCODER HAS NO VALID OUTPUT. | | | | | | | | | |
| 3416 HEEA | 1078D 45397 | BELL 206L1 | | | ACK | ENCODER A30 | FAILED COCKPIT | | 11/10/97 HEEA0011887 |
| ENCODER HAS NO VALID OUTPUT. | | | | | | | | | |
| 3416 HEEA | 5745N 45489 | BELL 206L1 | | | | ALTIMETER 59323H5 | DEFECTIVE COCKPIT | | 11/13/97 HEEA0012007 |
| ALTIMETER EXCESSIVE FRICTION ERROR. | | | | | | | | | |
| 3416 HEEA | 41791 51465 | BELL 206L3 | | | ACK | ENCODER A30 | FAILED COCKPIT | | 11/13/97 HEEA0012018 |
| ALTITUDE ENCODER NO VALID OUTPUT FROM ENCODER. CALIBRATE TO 28 VDC. | | | | | | | | | |
| 3421 HEEA | 107PH 2789 | BELL 206B3 | | | | INDICATOR 5040017901 | FAILED COCKPIT ATTITUDE | | 11/12/97 HEEA0011962 |
| UPON INSTALLATION, ATTITUDE INDICATOR CAUSED CIRCUIT BREAKER TO POP. REPLACED WITH SERVICEABLE PART. | | | | | | | | | |
| 3423 HEEA | 107PH 2789 | BELL 206B3 | | | | COMPASS C2300L424 | FAILED COCKPIT | | 11/19/97 HEEA0012042 |
| COMPASS WILL NOT ADJUST. | | | | | | | | | |
| 3425 HEEA | 2163Y 3496 | BELL 206B3 | | | KFM112 | TRANSMITTER 071105200 | FAILED COCKPIT | | 11/12/97 HEEA0011939 |
| COULD NOT CALIBRATE FLUX VALVE, OFF 20DEG. | | | | | | | | | |

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS (cont'd)

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| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
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| 3425 HEEA | 5744Y 45465 | BELL 206L1 | | | | HSI CONTROL 066304605 | INOPERATIVE COCKPIT | | 11/12/97 HEEA0011938 |
| HSI INDICATOR LIGHTS INOPERATIVE. | | | | | | | | | |
| 3452 HEEA | 103PH 3000 | BELL 206B3 | | | KT76 | TRANSPONDER 066106200 | DEFECTIVE COCKPIT | | 11/10/97 HEEA0011862 |
| IDENT LIGHT INOPERATIVE. PERFORMED PRELIMINARY INSPECTION. REPLACED V301 PHOTOCCELL P/N 134-05005-0002. REPLACED DS301 BULB P/N 037-00025-0000, REPAIRED. ALSO REPLACED FACEPLATE P/N 200-2020-01, LOCKING SCREW P/N 076-0921-00 AND GROOVE PIN P/N 090-0265-00. REPAIRED.BENCH CHECK GOOD. | | | | | | | | | |
| 3452 HEEA | 1078G 45398 | BELL 206L1 | | | KT76 | TRANSPONDER 066106200 | DEFECTIVE COCKPIT | | 11/10/97 HEEA0011857 |
| KNOB BROKE OFF FACE. REPLACED KNOB. ALSO REPLACED WEAK V101 CAVITY OSCILLATOR. REPAIRED UNIT. ADJUSTED PULSE AND FREQUENCY. BENCH CHECK GOOD. | | | | | | | | | |
| 3452 HEEA | 41791 51465 | BELL 206L3 | | | KT76 | TRANSCIEVER 066106200 | FAILED COCKPIT | | 11/10/97 HEEA0011869 |
| TRANSCIEVER INOPERATIVE. PERFORMED PRELIMINARY INSPECTION. FOUND POWER OUT LOW. ADJUSTED V101 CAVITY TUBE. NO HELP. REPLACED V101 CAVITY TUBE P/N C2080A, V301 PHOTOCCELL P/N 134-05005-0002 AND FACEPLATE P/N 200-02020-0001, REPAIRED. ADJUSTED PULSE WIDTH AND FREQUENCY.BENCH CHECK GOOD. | | | | | | | | | |
| 3457 HEEA | 1081T 45411 | BELL 206L1 | | | | ANTENNA 1624820 | FAILED COCKPIT GPS | | 11/10/97 HEEA0011868 |
| ANTENNA WON'T ACQUIRE STATIONS. | | | | | | | | | |
| 2370 HEEA | 27805 31106 | BELL 212 | | | | CVR 9806019001 | FAILED COCKPIT | 2436 | 11/13/97 HEEA0011982 |
| CVR WILL NOT TEST. ALSO REMOVED PINGER P/N DK100, S/N DD13473 WITH CVR. REPLACEMENT PINGER S/N S9181 RECEIVED WITH CVR. | | | | | | | | | |
| 2370 HEEA | 5736J 31140 | BELL 212 | | | | CVR 9806019001 | FAILED COCKPIT | 3430 | 11/13/97 HEEA0011983 |
| CVR WILL NOT TEST. ALSO REMOVED PINGER P/N DK100, S/N DL8982 WITH CVR. REPLACEMENT PINGER S/N S9081 RECEIVED WITH CVR. | | | | | | | | | |
| 3442 HEEA | 102PH 30899 | BELL 212 | | | P4001 | INDICATOR MI5852013 | DEFECTIVE COCKPIT | | 11/10/97 HEEA0011870 |
| THE CONTRAST IS NOT BRIGHT ENOUGH TO READ THE SCREEN. THERE IS ONLY ONE COLOR. INSTALLED SERVICEABLE PART. | | | | | | | | | |
| 2312 HEEA | 2258F 33073 | BELL 412 | | | KTR905 | TRANSCIEVER 064100900 | FAILED COCKPIT VHF | | 11/12/97 HEEA0011969 |
| TRANSCIEVER WEAK AND UNREADABLE, NO TRANSMIT. | | | | | | | | | |
| 2370 HEEA | 107X 33113 | BELL 412 | | | | CVR 9806020023 | FAILED COCKPIT | 22 | 11/12/97 HEEA0011978 |
| CVR TEST LIGHT ON CONSTANTLY. | | | | | | | | | |
| 3416 HEEA | 1202T 33112 | BELL 412 | | | | ALTIMETER 1003511424 | DEFECTIVE COCKPIT | | 11/13/97 HEEA0012011 |
| ALTIMETER HAS EXCESSIVE FRICTION ERROR. | | | | | | | | | |
| 3416 HEEA | 1202T 33112 | BELL 412 | | | | ALTIMETER 6221205004 | DEFECTIVE COCKPIT | | 11/13/97 HEEA0012006 |
| ALTIMETER MISSING PH LIGHT. | | | | | | | | | |

***** DENOTES SIGNIFICANT OCCURRENCE

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS (cont'd)

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------|---------------------|-----------------------|----------------------|----------------------------|---------------------------------|-----------|----------------------------|
| 3416 HEEA | 21498 36003 | BELL 412 | | | | ALTIMETER 8503S20LW5V | STICKS COCKPIT | | 11/18/97 HEEA0012028 |
| ALTIMETER STICKS AT 500 FEET THEN JUMPS 300 FEET. DOES SAME AT 1500 FEET. | | | | | | | | | |
| 3421 HEEA | 1202T 33112 | BELL 412 | | | | INDICATOR 222375033103 | PRECESSES COCKPIT ATTITUDE | | 11/19/97 HEEA0012044 |
| ATTITUDE PRECESSES IN AIRCRAFT. | | | | | | | | | |
| 3421 HEEA | 108X 33115 | BELL 412 | | | | INDICATOR 222375033103 | PRECESSES COCKPIT ATTITUDE | | 11/18/97 HEEA0012027 |
| ATTITUDE INDICATOR PRECESSES EXCESSIVELY IN ROLL AXIS. | | | | | | | | | |
| 3425 HEEA | 142PH 33150 | BELL 412 | | | | INDICATOR 1113025 | FAILED COCKPIT HSI | | 11/13/97 HEEA0011994 |
| HSI COURSE SELECTED CHANGES RANDOMLY IN FLIGHT. CHANGES CONSTANT WHEN THE COURSE SELECT SWITCH IN THE AIRCRAFT IS SWITCHED BETWEEN THE PILOT AND COPILOT POSITION. | | | | | | | | | |
| 3442 HEEA | 3911L 33023 | BELL 412 | | | P4001 | INDICATOR MI5852013 | FAILED COCKPIT RADAR | | 11/12/97 HEEA0011965 |
| PILOT REPORTED RADAR IMAGE OCCASSIONALLY DISTORTED AND BROKEN. WHEN UNIT WAS TURNED ON FOR TROUBLESHOOTING, SCREEN WOULD NOT COME ON (STAYED BLANK EVEN AFTER A LONG-UP PERIOD. REPLACED WITH SERVICEABLE PART. | | | | | | | | | |
| 3452 HEEA | 22347 36005 | BELL 412 | | | | CONTROL 071119218 | DEFECTIVE TRANSPONDER | | 11/10/97 HEEA0011928 |
| XPONDER CONTROL LIGHTS DIM FOR DAY USE. PERFORMED PRELIMINARY INSPECTION. FOUND DISPLAY DIM. REPLACED V101 PHOTOCCELL. REPAIRED. BENCH CHECK GOOD. | | | | | | | | | |
| 3455 HEEA | 3893N 33010 | BELL 412 | | | | RECEIVER 066104701 | FAILED ADF | | 11/12/97 HEEA0011970 |
| ADF WILL NOT RECEIVE FOR VERY LONG. | | | | | | | | | |
| 2312 HEEA | 911PF S718 | BOLKMS BO105S | | | RT40 | TRANSCIEVER 40001278500 | INTERMITTENT COCKPIT VHF | | 11/10/97 HEEA0011864 |
| RT40 TRANSCIEVER VERY INTERMITTENT RECEIVE. | | | | | | | | | |
| 2562 HEEA | 911FL S717 | BOLKMS BO105S | | | NARCO | ELT ELT1104 | WEAK COCKPIT | | 11/12/97 HEEA0011944 |
| ELT HAS WEAK SIGNAL. | | | | | | | | | |
| 3416 HEEA | 50293 S677 | BOLKMS BO105S | | | ACK | ENCODER A30 | FAILED COCKPIT | | 11/10/97 HEEA0011886 |
| ALTITUDE ENCODER NO VALID OUTPUT. | | | | | | | | | |
| 3421 HEEA | 81992 S827 | BOLKMS BO105S | | | | INDICATOR 5040017901 | INOPERATIVE COCKPIT ATTITUDE | | 11/12/97 HEEA0011959 |
| ATTITUDE INDICATOR INOPERATIVE. | | | | | | | | | |
| 3457 HEEA | 135AE S838 | BOLKMS BO105S | | | GARMIN INT | GPS 150 0110005400 | FAILED COCKPIT | | 11/12/97 HEEA0011972 |
| GPS INTERNAL BATTERY DEAD. | | | | | | | | | |

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DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS (cont'd)

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| 2210 HEEA | 134AE 7237 | BOLKMS BK117B2 | | | | CONTROL UNIT 117884141 | FAILED COCKPIT | | 11/13/97 HEEA0011995 |
| CONTROL UNIT DROPPED OFF LINE SEVERAL TIMES, WOULD NOT COME ON ONE TIME. | | | | | | | | | |
| 2312 HEEA | 401PH 7050 | BOLKMS BK117A3 | | | | TRANSCIVER 4000102002 | FAILED COCKPIT | | 11/10/97 HEEA0011863 |
| RT138 PIN ON FRONT CONNECTOR BROKEN. POPS CIRCUIT BREAKER. | | | | | | | | | |
| 2312 HEEA | 401PH 7050 | BOLKMS BK117A3 | | | RT138F | TRANSCIVER 40001452502 | FAILED COCKPIT | | 11/10/97 HEEA0011859 |
| TRANSCIVER WILL NOT TRANSMIT. FOUND VR3 VOLTAGE REGULATOR ON VCO CONTROL BOARD INOPERATIVE. REPLACED VOLTAGE REGULATOR. REPAIRED UNIT. BENCH CHECK GOOD. | | | | | | | | | |
| 3452 HEEA | 911LK 7068 | BOLKMS BK117B2 | | | KT76 | TRANSPONDER 066106200 | FAILED COCKPIT | | 11/10/97 HEEA0011858 |
| TRANSPONDER WILL NOT IDENT. REPLACED CAVITY OSCILLATOR V01. REPAIRED. INSTALLED CAP PLUGS. ADJUSTED FREQUENCY. BENCH CHECK GOOD. | | | | | | | | | |
| 3416 EI4R | 701TF 4608104 | PIPER PA46310P | | | | ENCODER 5035P | HANG UP END SHAKE | | 10/25/97 97ZZX4846 |
| INCOMING INSPECTION, TWO CRITICAL SHAFTS IN THE MECHANISM HAD ZERO END SHAKE. THE OVERHAUL MANUAL CALLS OUT A MINIMUM END SHAKE OF .0020 INCH. THE ZERO END SHAKE CONDITION IN SIMILAR INSTRUMENTS HAS CAUSED THE POINTERS TO HANG UP IN DESCENT AFTER A 1-1/2 HOUR COLD SOAK AT 35 DEGREES FAHRENHEIT. THE FACTORY HAS INDICATED THAT AN END SHAKE OF .0004 INCH OR LESS WILL CAUSE POINTER HANG-UPS AFTER A COLD TEST. | | | | | | | | | |
| 2210 HEEA | 1547D 760077 | SKRSKY S76A | | | | YAW INDICATOR 7690001804103 | MALFUNCTION ROLL-PITCH | | 11/19/97 HEEA0012059 |
| YAW KICKING IN ROLL AND PITCH AFTER ONE HOUR OF FLIGHT. | | | | | | | | | |
| 3414 HEEA | 1547D 760077 | SKRSKY S76A | | | | INDICATOR 2002011293 | FAILED AIR SPEED | | 11/18/97 HEEA0012022 |
| SLOW TO COME UP ON SPEED. SENT TO MASCO FOR INSPECTION AND REPAIR. | | | | | | | | | |
| 3421 HEEA | 1547D 760077 | SKRSKY S76A | | | | GYRO 7660002113102 | MALFUNCTION COCKPIT VG | | 11/18/97 HEEA0012026 |
| AFTER ONE HOUR OF FLIGHT TIME NR1 PITCH KICKS. | | | | | | | | | |
| 2312 HEEA | 60951 2771 | SNIAS AS350B2 | | | KY196 | TRANSCIVER 064101902 | FAILED COCKPIT | | 11/10/97 HEEA0011860 |
| VHF TRANSCIVER WILL NOT TRANSMIT IN FLIGHT. FOUND POWER OUT TO BE 3 WATTS BELOW SPECS. REPLACED CAPACITOR C623. REPAIRED. ADJUSTED SQUELCH AND SIDETONE. BENCH CHECK GOOD. | | | | | | | | | |

(End of DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS)

DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - PROPELLERS**11/23/97 - 11/29/97 ISSUE: 97-48 ZAC-327**

| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
|-------------|----------------------|--------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------|----------------------|--------------------------|---------------------------|-----------|----------------------------|
| 6110 | | BEECH 18* | | HARTZL HCB3TN5 | | BEARING 1851T | CRACKED PROP | | 1/1/96 EY2R9600012 |
| | | PROP ASSY BEARING CRACKED | | | | | | | |
| 6114 | | BEECH 9555 | | MCAULY 2AF34C55 | | HUB C4206C55 | CRACKED THREAD AREA | | 1/1/96 EY2R9600001 |
| | | PROP CRACKED IN HUB THREAD AREA | | | | | | | |
| 6112 | 110BA LD279 | BEECH 65B80 | | | RAPCO | DEICE BOOT RA12884 | FAILED NR 2 PROP WIRES | 1345 | 11/7/97 97ZZZX4839 |
| | | DEICE BOOT LEAD BREAKS 12 INCHES FROM TERMINALS AFTER FOLLOWING NEW INSTALLATION SUGGESTIONS. | | | | | | | |
| 6112 | 107BA LD358 | BEECH 65B80 | | | RAPCO | DEICE BOOT RA12884 | FAILED NR 1 PROP WIRES | 540 | 10/3/97 97ZZZX4840 |
| | | DEICE BOOT LEADS ARE CONTINUING TO BREAK APPROXIMATELY 12 INCHES FROM THE TERMINALS EVEN AFTER RAPCO'S NEW INSTALLATION SUGGESTIONS. | | | | | | | |
| 6111 | | BEECH 95B55 | | HARTZL HCC2YF2 | | FEATHER SPRING 15941 | CRACKED PROP | | 1/1/96 EY2R9600013 |
| | | PROP ASSY FEATHERING SPRING CRACKED | | | | | | | |
| 6110 | | CESSNA 152 | | MCAULY 1A103TCM | | FIX PITCH | CRACKED NR 1 MT HOLE | | 2/1/96 EY2R9600015 |
| | | NR 1 MOUNTING HOLE | | | | | | | |
| 6114 | | CESSNA 180 | | MCAULY 3AF34C* | | HUB C5480C66 | CRACKED NR 2 SOCKET | | 1/1/96 EY2R9600002 |
| | | HUB CRACKED IN NR2 BLADE SOCKET | | | | | | | |
| 6114 | | CESSNA 188CESSNA | | MCAULY D2A34C98 | | HUB C4716C98 | CRACKED NR 2 SOCKET | | 1/1/96 EY2R9600008 |
| | | NR 2 BLADE SOCKET CRACKED | | | | | | | |
| 6114 | | CESSNA 188CESSNA | | MCAULY D2A34C98 | | HUB C4716C98 | CRACKED PROP | | 2/1/96 EY2R9600020 |
| | | PROP HUB CRACKED | | | | | | | |
| 6110 | | CESSNA 208B | | MCAULY 3GFR34C703 | | SPRING HOUSING C5304 | CRACKED PROP ASSY | 3797 | 1/1/96 EY2R9600007 |
| | | SPRING HOUSING CRACKED | | | | | | | |
| 6111 | | CESSNA 310Q | | MCAULY D3AF32C80 | | BLADE S82NC2 | CRACKED THREAD AREA | | 1/1/96 EY2R9600009 |
| | | BLADE SN K66887YS, CRACKED IN THREAD AREA | | | | | | | |
| 6114 | | CESSNA 310 | | MCAULY 3AF32C87 | | NUT C3475 | CRACKED HUB | | 1/1/96 EY2R9600004 |
| | | PROP HUB NUT CRACKED | | | | | | | |

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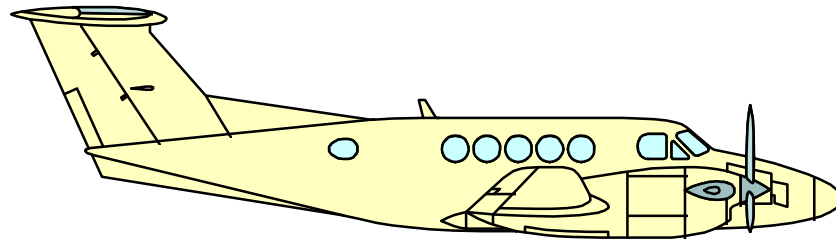
DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - PROPELLERS (cont'd)

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| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
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| 6114 | | CESSNA 310 | | MCAULY 3AF32C87 | | HUB D7015C87 | CRACKED ROD HOLE | | 2/1/96 EY2R9600016 |
| HUB PISTON ROD HOLE CRACKED | | | | | | | | | |
| 6114 | | CESSNA 310 | | MCAULY 3AF32C87 | | HUB D7015C87 | CRACKED NR 1 SOCKET | | 2/1/96 EY2R9600017 |
| HUB HAS CRACKED IN NR1 & 3 SOCKETS | | | | | | | | | |
| 6114 | | CESSNA 310R | | MCAULY 3AF32C87 | | HUB D7015C87 | CRACKED NR 3 SOCKET | | 1/1/96 EY2R9600005 |
| PROP HUB CRACKED NR3 SOCKET | | | | | | | | | |
| 6114 | | CESSNA 310R | | MCAULY 3AF32C87 | | HUB D7027C87 | CRACKED PROP | | 1/1/96 EY2R9600003 |
| PROP HUB CRACKED | | | | | | | | | |
| 6114 | | CESSNA 414 | | MCAULY 3AF32C93 | | FERRULE C4451 | CRACKED HUB | | 1/1/96 EY2R9600006 |
| PROP CRACKED IN FERULE BEARING AREA | | | | | | | | | |
| 6110 | | MTSBSI MU2* | | HARTZL HCB3TN5 | | BEARING 1851T | CRACKED PROP | | 1/1/96 EY2R9600011 |
| PROP ASSY BEARING CRACKED | | | | | | | | | |
| 6111 | | PIPER PA34200 | | HARTZL HCC2YK2 | | BLADE FJC7666A | CRACKED BUTT AREA | | 1/1/96 EY2R9600014 |
| BLADE SN C43336, CRACKED IN BUTT AREA | | | | | | | | | |
| (End of DOMESTIC SERVICE DIFFICULTY REPORT SUMMARY - PROPELLERS) | | | | | | | | | |



INTERNATIONAL SERVICE DIFFICULTY REPORT



INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT**11/23/97 - 11/29/97 ISSUE: 97-48 ZAC-327**

| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
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| 2435 | | CESSNA A185F | | MCAULY D3A34C403 | | STARTER 646275 | FAILED BRUSHES | 490 | 6/17/97 CA970904016 |
| (CAN) STARTER FAILED AS BOTH INSULATED BRUSHES WERE SEVERED PROBABLY FROM VIBRATION NEXT TO WHERE BRUSH LEAD IS SANDWICHED BETWEEN TWO POLE STRAPS AND SPOT WELDED CLEAR THROUGH. ALL FOUR FIELD COILS WERE LOOSE ON THEIR RESPECTIVE POLE SHOES AND HAD CHAFED HALF WAY THROUGH THE INSULATION. THE SUBMITTER STATES THIS IS AN IMPROPER AND UNACCEPTABLE MANUFACTURING PROCESS. | | | | | | | | | |
| 5551 | | CESSNA 210M | CONT IO520L | MCAULY D3A34C404 | | FITTING 07326015 | FAILED HORIZ STAB | | 10/23/97 AU971339 |
| (AUS) HORIZONTAL STABILISER RH FORWARD ATTACHMENT FITTING FAILED AND SEPARATED. | | | | | | | | | |
| 2710 | | CESSNA 310Q | CONT IO470U | MCAULY 3AF32C87 | | CONTROL | JAMMED AILERON CONTROL | | 10/16/97 AU971345 |
| (AUS) AILERON CONTROL SYSTEM JAMMED. EVIDENCE OF FOD LODGED BETWEEN CHAIN AND SPROCKET. | | | | | | | | | |
| 2822 | | CESSNA 402C | CONT TSIO520VB | MCAULY 3AF32C93 | PARKER 2B729OH | PUMP 7AC320 | JAMMED FUEL BOOST PUMP | 1444 | 10/27/97 AU971351 |
| (AUS) AUXILIARY FUEL PUMP CONTAMINATED BY ALUMINIUM SWARF. THE SWARF JAMMED THE PUMP VANES ALLOWING FUEL INTO THE MOTOR WINDINGS. THE AIRCRAFT HAD A SPAR CAP CHANGE IAW AD/CESSNA400/40 AMDT13 254.4 HOURS PREVIOUSLY. | | | | | | | | | |
| 3230 | | CESSNA 404CESSNA | | MCAULY 3FF32C501 | | PIPE 581710212 | FAILED GEAR RETRACT | | 10/18/97 AU971343 |
| (AUS) LANDING GEAR HYDRAULIC PIPE FAILED. | | | | | | | | | |
| 5320 | | CESSNA 550 | PWA JT15D4 | | | CHANNEL 552241738 | CRACKED WHEEL WELLS | 703 | 8/12/97 CA970902003 |
| (CAN) CHANNELS IN LEFT HAND WHEEL WELLS FOUND CRACKED DURING A PHASE INSPECTION. | | | | | | | | | |
| 2842 | | DHAV DHC2MK1 | PWA R985AN14B | | GENELC | TRANSMITTER TJ13 | FAILED FUEL QTY | 90 | 8/14/97 CA970820022 |
| (CAN) FUEL CONTENTS INDICATION ERRATIC. FUEL NEEDLE INDICATOR FLOPPING AROUND. TRANSMITTER FOUND FAILED. | | | | | | | | | |
| 5312 | | DHAV DHC2MK3 | | | | BULKHEAD C2FS533 | CRACKED FS228 | 9385 | 8/12/97 CA970822003 |
| (CAN) DURING 100 HOUR INSPECTION CRACKS WERE FOUND AT FUSELAGE STATION 228 ON THE BULKHEAD, ATTACHED TO THE VERTICAL STABILIZER SPAR. EMPENNAGE REMOVED AND BULKHEAD WAS REPLACED. TOTAL TIME ACCUMULATED SINCE LAST ANNUAL WAS 65 HOURS. NO REPORTS OF ROUGH WATER OR HARD LANDINGS OR FLIGHT TURBULENCE HAD BEEN REPORTED. | | | | | | | | | |
| 7602 | | DHAV DHC3 | | | | CONTROL CABLE 78710C636952 | FAILURE MIXTURE | | 8/8/94 CA940830006 |
| (CAN) MIXTURE CONTROL CABLE FAILED AT THREADED END AT SLIDE DUE TO FATIGUE. | | | | | | | | | |
| 6123 | | DHAV DHC6300 | PWA PT6A27 | HARTZL HCB3TN3 | | BETA SWITCH KX511 | STUCK NR2 ENGINE | | 8/20/97 CA970902030 |
| (CAN) NR2 ENGINE PROP WENT INTO FEATHER DURING CLIMBOUT. RH BETA LIGHT ON IN COCKPIT. BETA SWITCH ON ENGINE WAS STUCK INTERNALLY IN CLOSED POSITION. VISUALLY SWITCH LOOKED OK. BUT LIGHT WOULD NOT EXTINGUISH UNTIL SWITCH WAS DISCONNECTED FROM THE AIRCRAFT WIRING. SWITCH REPLACED. | | | | | | | | | |
| 2434 | | PIPER PA28151 | LYC O320E3D | SNSNCH M74DM | | ALTERNATOR 4111810 | FAILED DC GENERATOR | 1785 | 9/18/97 AU971341 |
| (AUS) ALTERNATOR FAILED. BATTERY WENT FLAT. | | | | | | | | | |

***** DENOTES SIGNIFICANT OCCURRENCE

| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------------------|---------------------|-----------------------|----------------------|--------------------------|---------------------------|-----------|----------------------------|
| 2140 | | PIPER PA31350 | | HARTZL HCE3YR2 | | REGULATOR 461731 | LEAKING HEATING SYSTEM | | 10/17/97 AU971347 |
| (AUS) HEATER FUEL REGULATOR LEAKING AT LOWER HOUSING JOIN. THE LEAK WAS CLASSED AS SUBSTANTIAL IN THAT IT WAS A SOLID JET OF FUEL. | | | | | | | | | |
| 5311 | | PIPER PA38112 | | | 7745002 | FRAME 7746709 | CRACKED BS 99.9 | | 10/9/97 AU971334 |
| (AUS) FUSELAGE FRAME LOCATED AT STN 99.9 CRACKED IN LOWER RH EDGE. THE FRAME HAD PREVIOUSLY BEEN REPAIRED BY INSTALLATION OF A DOUBLER AND CHANNEL AT BOTH LOWER CORNERS. | | | | | | | | | |
| (End of INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - AIRCRAFT) | | | | | | | | | |

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS 11/23/97 - 11/29/97 ISSUE: 97-48 ZAC-327

| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
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| 7240 | | AEROSP SA315B | TMECA ARTOUSTE3B | | | BURNER CAN | BURNED ENGINE | 3370 1826 | 8/12/97 CA970820004 |
| (CAN) INCREASE IN T4 TEMPERATURE LEAD TO INVESTIGATION AND A HOLE WAS FOUND BURNED THROUGH BURNER CAN. ENGINE WAS REMOVED FOR REPAIR. | | | | | | | | | |
| 7250 | | BELL 206B | ALLSN 250C20 | | | SEAL | LEAKING NR8 LABYRINTH | 14402 518 | 8/13/97 CA970904028 |
| (CAN) NR8 LABYRINTH SEAL LEAKING. | | | | | | | | | |
| 7321 | | BELL 206A | ALLSN 250C20 | | | FUEL CONTROL 23057344 | FAULTY ENGINE | 722 | 7/21/97 CA970904029 |
| (CAN) ENGINE SHUTS OFF WHEN THROTTLE IS RETARDED TO 25 DEGREES ON FCU QUADRANT. WHEN THROTTLE IS RIGGED TO IDLE AT 30 DEGREES, IT WILL GO BELOW 30 DEGREES IF THROTTLE IS ROLLED OFF ABRUPTLY. | | | | | | | | | |
| 8011 | | BELL 206L | ALLSN 250C20 | | | SEAL 6854424 | WORN STARTER PAD | 95 | 8/25/93 CA940902032 |
| (CAN) DURING INSPECTION, IT WAS NOTICED THAT THE STARTER SEAL WAS LEAKING. STARTER SEAL WAS REPLACED. | | | | | | | | | |
| 6410 | | BELL 47G3B1 | LYC TVO435B1A | | BELL | BLADE RE3115 | SEPARATED T/R BLD TIP WGHT | | 10/23/97 AU971354 |
| (AUS) TAIL ROTOR BLADE TIP WEIGHT SEPARATED. | | | | | | | | | |
| 8520 | | ENSTRM 280 | LYC HIO360C1A | | | CRANKCASE 10360CIA | CRACKED NR2 CYL AREA | 1866 316 | 5/26/97 CA970903009 |
| (CAN) A POST FLIGHT INSPECTION FOUND AN OIL LEAK UNDER THE NR2 CYLINDER. FURTHER INSPECTION FOUND A HAIRLINE CRACK APPROXIMATELY 8 INCHES LONG COMING OFF THE LOWER AFT NR2 CYLINDER BASE SHORT STUD. THE ENGINE WAS REMOVED FROM SERVICE. THE CRANKCASE HALVES WERE REPLACED AND THE AIRCRAFT RETURNED TO SERVICE. | | | | | | | | | |
| 6210 | | HUGHES 369D | ALLSN 250C20B | | HUGHES | PIN 369A10045 | BROKEN MAIN ROTOR BLADE | | 10/23/97 AU971346 |
| (AUS) MAIN ROTOR BLADE PIN BROKEN OFF IN AREA OF THREADED SHANK. | | | | | | | | | |
| 7260 | | SKRSKY S76A | ALLSN 250C30S | | | SEAL RUNNER | CRACKED PTO GEAR | | 8/15/97 CA970822001 |
| (CAN) SEAL LEAKING AT OUTPUT DRIVE FLANGE ON ENGINE GEARBOX. DURING SEAL REPLACEMENT, IT WAS NOTICED THAT THE PTO GEAR AT THE SEAL LIP CONTACT WAS CRACKED. | | | | | | | | | |
| (End of INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - HELICOPTERS) | | | | | | | | | |

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - ENGINES**11/23/97 - 11/29/97 ISSUE: 97-48 ZAC-327**

| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
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| 7240 | | AEROSP SA315B | TMECA ARTOUSTE3B | | | BURNER CAN | BURNED ENGINE | 3370 1826 | 8/12/97 CA970820004 |
| (CAN) INCREASE IN T4 TEMPERATURE LEAD TO INVESTIGATION AND A HOLE WAS FOUND BURNED THROUGH BURNER CAN. ENGINE WAS REMOVED FOR REPAIR. | | | | | | | | | |
| 7314 | | BEECH 100BEECH | PWA PT6A28 | | | PUMP 025323101 | WORN NR 1 ENG FUEL | 8992 | 8/4/97 CA970822002 |
| (CAN) FUEL PUMP ON NR1 ENGINE STOPPED DUE TO WEAR ON THE DRIVE SPLINE SHAFT LOCATED BETWEEN THE PUMP SHAFT AND THE ACESSORY CASE. | | | | | | | | | |
| 7322 | | BEECH E18S9700 | PWA R985AN14B | | BENDIX NAR9B | CARBURETOR A302503 | FAILED RH ENGINE | 661 | 8/21/97 CA970902022 |
| (CAN) NR2 ENGINE FAILED DUE TO FUEL STARVATION CAUSED BY CARBURETOR FLOAT STUCK IN THE CLOSED POSITION. NR2 ENGINE PROP FEATHERED, CUTOFF SWITCH FAILED TO CUTOFF FOLLOWING NR2 ENGINE FEATHERING OBTAINED. THIS RESULTED IN LH GENERATOR CIRCUIT BREAKER POPPING AND COULD NOT BE RESET DUE TO HIGH LOAD, RH FEATHERING PUMP RELAY CONTACTS FUSED DUE TO CONTINUOUS HIGH CURRENT LOADS, BATTERIES DRAINED AND COMPLETE ELECTRICAL FAILURE OCCURRED. RECTIFICATION: RH CARB REPLACED, RH CUTOFF SWITCH REPLACED, RH FEATHERING PUMP RELAY REPLACED, BATTERIES SERVICED AND CHARGED, LH AND RH ENGINES, GENERATORS AND PROPS (FEATHERINGS) FUNCTIONALLY CHECKED SERVICEABLE | | | | | | | | | |
| 7200 | | BEECH 200BEECH | PWA PT6A41 | | | ENGINE | FAILED EXHAUST STACK | | 10/3/97 CA971015062 |
| ***** | (CAN) DURING CLIMB OUT THE PILOT SAW FLAMES PULSING FROM NR2 ENGINE, ALL ENGINE PARAMETERS WERE NORMAL. THE ENGINE WAS SHUTDOWN AND THE AIRCRAFT LANDED WITHOUT INCIDENT. POST FLIGHT BORESCOPE INSPECTION FOUND NO ABNORMALITIES. FUEL NOZZELS AND THE OIL FILTERS WERE UNCONTAMINATED. A MAINTENANCE RUN REVEALED THAT MAX TGT WAS ACHIEVED PRIOR TO TARGET TORQUE. GAS GENERATOR SPEED AND FUEL FLOW WERE ALSO HIGH. REMOVAL OF THE POWER SECTION FOUND MINOR COATING LOSS ON THE CT VANE ASSEMBLY WITH RED/ORANGE DISCOLORATION ON THE CT BLADES ROOTS. THE LARGE EXIT DUCT HAD 3 ONE INCH CRACKS. THE ENGINE WILL BE SENT FOR INVESTIGATION AND REPAIR. | | | | | | | | |
| 8520 | | BEECH 58 | CONT IO550C | | | LIFTER 646277 | WORN NR 1 & 5 EXH VAL | 370 | 7/29/97 CA970820017 |
| (CAN) DURING INSPECTON FINE METAL METAL (STEEL) PARTICLES WERE FOUND IN THE OIL FILTER. FURTHER INSPECTION REVEALED THE NR1 AND NR5 CYLINDERS EXHAUST VALVE LIFTERS WERE FOUND WORN ON THE LIFTER FACES. THE ENGINE WILL BE RETURNED TO CONTINENTAL TO DETERMINE THE CAUSE OF THE FAILURE. | | | | | | | | | |
| 8520 | | BEECH E95 | LYC IO360B1B | | | STUD 5015 | SHEARED NR2 CYLINDER | 1596 | 9/1/97 CA970904034 |
| (CAN) ON DAILY INSPECTION THE UPPER FORWARD CYLINDER BASE STUD ON THE NR2 CYLINDER WAS FOUND SHEARED OFF. THE STUD WAS REPLACED AND THE AIRCRAFT RETURNED TO SERVICE. | | | | | | | | | |
| 7250 | | BELL 206B | ALLSN 250C20 | | | SEAL | LEAKING NR8 LABYRINTH | 14402 518 | 8/13/97 CA970904028 |
| (CAN) NR8 LABYRINTH SEAL LEAKING. | | | | | | | | | |
| 7321 | | BELL 206A | ALLSN 250C20 | | | FUEL CONTROL 23057344 | FAULTY ENGINE | 722 | 7/21/97 CA970904029 |
| (CAN) ENGINE SHUTS OFF WHEN THROTTLE IS RETARDED TO 25 DEGREES ON FCU QUADRANT. WHEN THROTTLE IS RIGGED TO IDLE AT 30 DEGREES, IT WILL GO BELOW 30 DEGREES IF THROTTLE IS ROLLED OFF ABRUPTLY. | | | | | | | | | |
| 7414 | | BLANCA 1731A | LYC IO540K1E5 | | BENDIX 103493704 | IMPULSE COUPLING 10349371 | WORN LH MAGNETO | 217 | 6/28/97 CA970902023 |
| (CAN) AIRCRAFT EXPERIENCED LOSS OF ENGINE POWER IN FLIGHT. EMERGENCY NO POWER LA NDING CARRRIED OUT IN FIELD. AIRCRAFT REMOVED FROM FIELD AND DISASSEMBLY OF ENGINE REVEALED THE LEFT HAND MAGNETO IMPULSE COUPLING LOCKED-UP, STRIPPING THE GEARS IN THE ACCESSORY CASE, CAUSING COMPLETE ENGINE FAILURE. | | | | | | | | | |

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - ENGINES (cont'd)

11/23/97 To 11/29/97 ISSUE: 97-48 ZAC-327

| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
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| 8500 | | BNORM BN2A27 | LYC O540E4C5 | | | ENGINE | FAILED POWER SECT | 1576 | 8/29/97 CA970910006 |
| (CAN) ENGINE QUIT WITHOUT WARNING. INSPECTION FOUND METAL IN THE OIL SCREENS. NO EXTERNAL LEAKS OR HOLES. PROBLEM TO BE DETERMINED ON TEARDOWN | | | | | | | | | |
| 7322 | | CESSNA 150C | CONT O200A | | | CARBURETOR MA3SPA | WORN CARB HEAT BOX | 7190 | 7/14/97 CA970910004 |
| (CAN) DURING CARBURETOR INSPECTION THE FORWARD SUPPORT BRACKET WAS FOUND LOOSE, FURTHER INSPECTION REVEALED THE SCREWS HOLDING THE BRACKET TO THE CARBURETOR HEAT BOX WERE LOOSE, EVEN THOUGH THE SCREWS WERE INSTALLED WITH LOCKWASHERS AND WERE PROPERLY LOCKWIRED. INSPECTION OF THE SCREWS FOUND THE THREADS WERE WORN AND DID NOT GRIP. THE LOCATION OF THESE SCREWS INSIDE THE CARBURETOR HEAT BOX COULD CREATE A INGESTION PROBLEM, THE ONLY WAY TO PROPERLY INSPECT THESE SCREWS IS TO REMOVE THE AIR FILTER BOX. | | | | | | | | | |
| 8520 | | CESSNA 152 | LYC O235L2C | MCAULY 1A103TCM | | TAPPET | BROKEN NR2 EX PUSH ROD | 249 | 8/18/97 CA970902029 |
| (CAN) SEVERE ENGINE VIBRATION IN FLIGHT. AIRCRAFT MADE FORCED LANDING. POST FLIGHT INSPECTION FOUND THE NR2 CYLINDER PUSH ROD LOOSE AND INTAKE PUSH ROD BENT. IT IS SUSPECTED THE TAPPET IS BROKEN. ENGINE WAS RETURNED TO MANUFACTURER. | | | | | | | | | |
| 7414 | | CESSNA 172N | LYC O320H2AD | | | MAGNETO 1038255514 | FAILED DRIVE TEETH | | 8/26/97 CA970915001 |
| (CAN) ENGINE RAN ROUGH ON THE GROUND RUN AND WAS SHUTDOWN. THE PILOT FAILED IN HIS ATTEMPT TO RESTART THE ENGINE FOR TROUBLESHOOTING. REMOVAL OF THE MAGNETO REVEALED THE DRIVE TEETH WERE BROKEN. THE MAGNETO WAS REPLACED AND THE AIRCRAFT WAS RETURNED TO SERVICE. | | | | | | | | | |
| 8530 | | CESSNA 172N | LYC O320D3G | MCAULY 1C160DTM | LYC | VALVE | STICKING ENGINE EXH | | 1/18/97 AU971342 |
| (AUS) ENGINE EXHAUST VALVE STUCK AND PUSHROD DEFORMED. | | | | | | | | | |
| 8550 | | CESSNA R172K | CONT IO360K | MCAULY 2A34C203 | | PLUG | LOOSE ENG OIL DRAIN | | 10/26/97 AU971338 |
| (AUS) ENGINE OIL DRAIN PLUG NOT TIGHTENED OR LOCKWIRED FOLLOWING AN OIL CHANGE. PERSONNEL/MAINTENANCE ERROR. | | | | | | | | | |
| 8530 | | CESSNA 182B | CONT O470L | | | CYLINDER VG47005A21P | CRACKED NR1 POSITION | 3 | 7/24/97 CA970902015 |
| (CAN) PILOT REPORTED POWER LOSS AND TEMPORARY ENGINE FAILURE. POST FLIGHT INSPECTION FOUND NR1 CYLINDER CRACKED. | | | | | | | | | |
| 8500 | | CESSNA 340A | CONT TSIO520N | MCAULY 3AF32C93 | | ENGINE | FAILED #2 POSITION | | 4/10/97 CA970903002 |
| (CAN) NR 2 ENGINE FAILED | | | | | | | | | |
| 8530 | | CESSNA 404CESSNA | CONT GTSIO520M | MCAULY 3FF32C501 | | CLAMP | LOOSE RT ENG INDUCTION | | 9/20/97 AU971344 |
| (AUS) RH ENGINE FLEXIBLE INDUCTION TRUNK FORWARD ATTACHMENT CLAMP LOOSE. | | | | | | | | | |
| 8530 | | CESSNA 404CESSNA | CONT GTSIO520M | MCAULY 3FF32C501 | CONT | COVER 53509162 | LOOSE CYL ROCKER | 615 | 6/29/97 AU971366 |
| (AUS) ENGINE CYLINDER ROCKER COVER LOOSE. ONE ROCKER SCREW MISSING (FOUND IN COWL) AND THE OTHER FOUR SCREWS LOOSE ALLOWING OIL TO LEAK AT THE GASKET. | | | | | | | | | |
| 8550 | | CESSNA 404CESSNA | CONT GTSIO520M | MCAULY 3AF34C74 | | CAP | LOOSE ENG OIL CAP | | 6/20/97 AU971360 |
| (AUS) RH ENGINE OIL FILLER CAP LOOSE. OIL LEAKING FROM ENGINE.PERSONNEL/MAINTENANCE ERROR. | | | | | | | | | |

***** DENOTES SIGNIFICANT OCCURRENCE

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - ENGINES (cont'd)

11/23/97 To 11/29/97 ISSUE: 97-48 ZAC-327

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| 8530 | | DHAV DHC2MK1 | PWA R985AN14B | | 399353 | CYLINDER | CRACKED NR1 POSITION | 1322 | 7/31/97 CA970904018 |
| (CAN) NR1 CYLINDER SEPARATED BETWEEN THE TOP OF BARREL AND CYLINDER HEAD AT NR3 FIN ON THE HEAD AND CRACKED BETWEEN FRONT AND REAR SPARK PLUGS. | | | | | | | | | |
| 8530 | | DHAV DHC3 | PWA R1340* | | | CYLINDER | CRACKED NR 2 | 142 | 8/2/97 CA970822006 |
| (CAN) NR2 CYLINDER FOUND CRACKED ON 100 HOUR INSPECTION. | | | | | | | | | |
| 8520 | | ENSTRM 280 | LYC HIO360C1A | | | CRANKCASE 10360CIA | CRACKED NR2 CYL AREA | 1866 316 | 5/26/97 CA970903009 |
| (CAN) A POST FLIGHT INSPECTION FOUND AN OIL LEAK UNDER THE NR2 CYLINDER. FURTHER INSPECTION FOUND A HAIRLINE CRACK APPROXIMATELY 8 INCHES LONG COMING OFF THE LOWER AFT NR2 CYLINDER BASE SHORT STUD. THE ENGINE WAS REMOVED FROM SERVICE. THE CRANKCASE HALVES WERE REPLACED AND THE AIRCRAFT RETURNED TO SERVICE. | | | | | | | | | |
| 7414 | | FOUND FBA2C | LYC O540A1C5 | | BENDIX S6LN21 | CAPACITOR 1051676 | FAILED MAGNETO | 5 | 6/17/97 CA970904017 |
| (CAN) TWO CAPACITORS FAILED AFTER A SIMILAR SHORT OPERATION. WHEN TESTED ON A DIGITAL CAPACITANCE METER BOTH WOULD GIVE INTERMITTENT IRREGULAR READINGS. NYLON PUSHER BLOCK WAS MELTED ON THE BREAKER POINT SIDE INDICATING EXCESSIVE HEAT BUILD UP, BUT THE CONTACT SURFACE LOOKED VISUALLY NORMAL UNDER A 10X GLASS. SUSPECT EITHER DEFECTIVE CAPACITATORS OR THEY MAY HAVE BEEN DAMAGED FROM HIGH VOLTAGE SPIKERS FROM THE STARTER SOLENOID. THERE WAS .7 VOLT LEAKAGE TO THE "P" LEAD DURING SOLENOID ACTUATION WITHOUT THE STARTER CURRENT BEING APPLIED. COMBINATION MAGNETOS/STARTER SWITCH DISASSEMBLED AND CLEANED. | | | | | | | | | |
| 7260 | | SKRSKY S76A | ALLSN 250C30S | | | SEAL RUNNER | CRACKED PTO GEAR | | 8/15/97 CA970822001 |
| (CAN) SEAL LEAKING AT OUTPUT DRIVE FLANGE ON ENGINE GEARBOX. DURING SEAL REPLACEMENT, IT WAS NOTICED THAT THE PTO GEAR AT THE SEAL LIP CONTACT WAS CRACKED. | | | | | | | | | |

(End of INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - ENGINES)

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS

11/23/97 - 11/29/97 ISSUE: 97-48 ZAC-327

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| 3457 | | BEECH A100 | PWA PT6A28 | | KING KLN90B | CIRCUIT BOARD 22831 | SHORTED GPS RECEIVER | 91 | 10/15/97 CA971020011 |
| (CAN) SMOKE NOTED AND SMELT COMING FROM BEHIND INSTRUMENT PANEL DURING DESCENT. BATTERY AND BOTH GENERATORS WERE SHUT OFF AND THE SMOKE STOPPED AVIONICS MASTER RESELECTED ON AND SMOKE OBSERVED AGAIN INVESTIGATION FOUND THE GPS RECEIVER CIRCUIT BOARD HAD OVERHEATED IN ONE AREA. THE BOARD APPEARS TO HAVE GROUNDED TO THE CASE. THE MANUFACTURER IS INVESTIGATING ALONG WITH THE OPERATOR. MORE INFO TO FOLLOW. | | | | | | | | | |
| 3452 | | CESSNA 182Q | | | | TRANSPONDER RT359A | FAILED ATC TRANSPONDER | | 10/31/97 AU971365 |
| (AUS) TRANSPONDER FAULTY. FOUND DURING TEST IAW AD/RAD/47 AND AD/RAD/43 | | | | | | | | | |

(End of INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - COMPONENTS)

INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - PROPELLERS**11/23/97 - 11/29/97 ISSUE: 97-48 ZAC-327**

| ATA OPER | REG. NO SERIAL NO | ACFT MAKE ACFT MODEL | ENG MAKE ENG MDL | PROP MAKE PROP MDL | COMP MFG COMP MDL | PART NAME PART NUMBER | PART COND PART LOC. | TT TSO | DIFF. DATE OPER CONT NO |
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| 6114 | | BEECH A36 | CONT IO520BA | MCAULY 2A36C23 | | LOW PITCH STOP | MIS ADJUSTED PROP | 594 | 8/29/97 CA970910011 |
| (CAN) AIRCRAFT NOT GETTING FULL RPM. PROPELLER AND GOVERNOR REMOVED FOR BENCH CHECK. GOVERNOR SET CORRECTLY. PROPELLER WAS SET TOO HIGH PREVIOUS SETTING, INCORRECT REFERENCE STATIONS WERE USED. | | | | | | | | | |
| 6111 | | CESSNA 180 | CONT O470K | MCAULY 2A34C66 | | BLADES | CORRODED PROP | 1342 531 | 8/15/95 CA970902016 |
| (CAN) PROPELLER RECEIVED FOR CORROSION INSPECTION. CORROSION WAS FOUND ON THE PROPELLER BLADES AND THE CYLINDER WAS FOUND TO BE OVERSIZE. | | | | | | | | | |
| 6111 | | CESSNA 185 | CONT IO470F | MCAULY D2A34C58 | | BLADE S90AT2 | OUT OF SPECS PITCH DISTRIBUT | 485 | 8/22/97 CA970902024 |
| (CAN) PROPELLER RECEIVED FOR CORROSION INSPECTION. THE PROP BLADES AIRFOIL PITCH DISTRIBUTION WAS NOT TO SPECIFICATIONS. THE HUB PILOT TUBE BORE (P/N 4715) WAS OVERSIZE. | | | | | | | | | |
| 6114 | | MOONE M20C | LYC O360A1D | MCAULY C3D36C41582 | | CYLINDER B5264 | OVERSIZE PROP SEAL AREA | 123 | 9/2/97 CA970910009 |
| (CAN) PROPELLER RECEIVED FOR CORROSION INSPECTION. THE CYLINDER WAS FOUND TO BE OVERSIZE. | | | | | | | | | |
| (End of INTERNATIONAL SERVICE DIFFICULTY REPORT SUMMARY - PROPELLERS) | | | | | | | | | |



U.S. Department
of Transportation
**Federal Aviation
Administration**

SERVICE DIFFICULTY REPORT SUMMARY

GENERAL AVIATION - INDEX



The following information provides a tally of the Service Difficulty Reports (SDR's) contained in this weeks issue of the General Aviation SDR Summary. The totals represent only a summation of the SDR's that were submitted to the FAA, Aviation Data Systems Branch, AFS-620, and processed in time for inclusion in the Summary. The first table is a tally of the number of SDR's submitted through the indicated Flight Standards District Office (FSDO). The second table sorts the SDR's by the aircraft or equipment make and model. The heading at the top of each table provides a two digit Joint Aircraft System/Component (JASC) code grouping (e.g., JASC codes 1100 thru 1800 are represented by the heading labeled 11-18) which categorizes in general, the problem areas for each reported discrepancy.

The Flight Standards Service Difficulty Program objective is to achieve prompt and appropriate correction of conditions adversely affecting continued airworthiness of aeronautical products. This is accomplished by the collection of Service Difficulty and Malfunction or Defect Reports. SDR's are consolidation and collation into common data base where they are analyzed for trends, problems, and alert information. This information is then disseminated to the appropriate segments of the aviation community and to other FAA offices.

The number of SDR's submitted is not an indicator of the mechanical reliability or fitness of an air carrier's aircraft fleet and should not be used as such. The air carriers certificate holding office has the primary responsibility for planning, programming evaluations, and assessing the performance of operators. Questions regarding an air carrier's fleet performance should be directed to the appropriate Flight Standards District Office, Certificate Management Office, or Certificate Management Unit.

GENERAL AVIATION SUMMARY INDEX BY DISTRICT OFFICE**11/23/97 To 11/29/97 ISSUE: 97-48 ZAC-327**

| DISTRICT OFFICE | | 11-18 | 21-29 | SDR TOTALS BY FAA ATA SYSTEM CHAPTER | | | | 71-79 | 80-85 | TOTAL |
|-----------------|----|----------|-----------|--------------------------------------|----------|-----------|-----------|-----------|-----------|------------|
| | | | | 30-38 | 45-49 | 51-57 | 61-67 | | | |
| AU | S | 0 | 4 | 2 | 0 | 2 | 2 | 0 | 5 | 15 |
| CA | | 0 | 2 | 1 | 0 | 2 | 5 | 12 | 10 | 32 |
| EA | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| GL | 03 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 18 |
| GL | 15 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| GL | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| NE | 03 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| NM | 04 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| NM | 09 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 |
| NM | 11 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| SO | 03 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| SO | 15 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| SW | 03 | 0 | 44 | 40 | 0 | 7 | 30 | 41 | 0 | 162 |
| WP | 01 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| WP | 09 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| WP | 11 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| TOTALS | | 0 | 53 | 44 | 0 | 14 | 59 | 59 | 15 | 244 |

(End of GENERAL AVIATION SUMMARY INDEX by DISTRICT OFFICE Report)

GENERAL AVIATION SUMMARY INDEX by MANUFACTURER MAKE and MODEL**11/23/97 To 11/29/97 ISSUE: 97-48 ZAC-327**

| AIRCRAFT MAKE | AIRCRAFT MODEL | SDR TOTALS BY FAA ATA SYSTEM CHAPTER | | | | | | | | TOTAL |
|------------------|-------------------|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 11-18 | 21-29 | 30-38 | 45-49 | 51-57 | 61-67 | 71-79 | 80-85 | |
| AEROSP | AS355F1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| AEROSP | SA315B | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 3 |
| AMTR | LANCAIR | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| BEECH | 100BEECH | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| BEECH | 18* | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| BEECH | 200BEECH | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 2 |
| BEECH | 200CBEECH | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| BEECH | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| BEECH | 65B80 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| BEECH | 9555 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| BEECH | 95B55 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| BEECH | A100 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| BEECH | A36 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| BEECH | B100 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| BEECH | E18S9700 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| BEECH | E95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| BEECH | F90 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| BELL | 206A | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| BELL | 206B | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| BELL | 206B3 | 0 | 0 | 5 | 0 | 0 | 0 | 1 | 0 | 6 |
| BELL | 206L | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| BELL | 206L1 | 0 | 4 | 8 | 0 | 0 | 0 | 1 | 0 | 13 |
| BELL | 206L3 | 0 | 8 | 4 | 0 | 1 | 7 | 4 | 0 | 24 |
| BELL | 206L4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| BELL | 212 | 0 | 3 | 1 | 0 | 0 | 0 | 3 | 0 | 7 |
| BELL | 214ST | 0 | 4 | 1 | 0 | 0 | 0 | 2 | 0 | 7 |
| BELL | 230 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |

| AIRCRAFT MAKE | AIRCRAFT MODEL | SDR TOTALS BY FAA ATA SYSTEM CHAPTER | | | | | | | | TOTAL |
|------------------|-------------------|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 11-18 | 21-29 | 30-38 | 45-49 | 51-57 | 61-67 | 71-79 | 80-85 | |
| BELL | 412 | 0 | 8 | 12 | 0 | 2 | 7 | 14 | 0 | 43 |
| BELL | 47G3B1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| BLANCA | 1731A | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| BNORM | BN2A27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| BOEING | 1072 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| BOLKMS | BK117A3 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| BOLKMS | BK117B1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| BOLKMS | BK117B2 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| BOLKMS | BO105C | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| BOLKMS | BO105S | 0 | 8 | 3 | 0 | 1 | 5 | 12 | 0 | 29 |
| CESSNA | 150C | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| CESSNA | 152 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| CESSNA | 152 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| CESSNA | 172N | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| CESSNA | 172N | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| CESSNA | 180 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| CESSNA | 182B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| CESSNA | 182Q | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| CESSNA | 185 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| CESSNA | 188CESSNA | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| CESSNA | 208B | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| CESSNA | 210C | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| CESSNA | 210M | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| CESSNA | 310 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 |
| CESSNA | 310Q | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| CESSNA | 310Q | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| CESSNA | 310R | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |

| AIRCRAFT MAKE | AIRCRAFT MODEL | SDR TOTALS BY FAA ATA SYSTEM CHAPTER | | | | | | | | TOTAL |
|------------------|-------------------|--------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | 11-18 | 21-29 | 30-38 | 45-49 | 51-57 | 61-67 | 71-79 | 80-85 | |
| CESSNA | 340A | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| CESSNA | 402C | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| CESSNA | 404CESSNA | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 4 |
| CESSNA | 414 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| CESSNA | 550 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| CESSNA | A185F | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| CESSNA | R172K | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| DHAV | DHC2MK1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| DHAV | DHC2MK3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| DHAV | DHC3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| DHAV | DHC6300 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| ENSTRM | 280 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| FOUND | FBA2C | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| HUGHES | 369D | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| HUGHES | 369HS | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| KAMAN | K1200 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| MOONEY | M20C | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| MTSBSI | MU2* | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| PIPER | PA28140 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| PIPER | PA28151 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| PIPER | PA28181 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| PIPER | PA31350 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| PIPER | PA34200 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| PIPER | PA38112 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| PIPER | PA46310P | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| SKRSKY | S64A | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| SKRSKY | S76A | 0 | 4 | 4 | 0 | 0 | 6 | 2 | 0 | 16 |

| AIRCRAFT MAKE | AIRCRAFT MODEL | 11-18 | 21-29 | SDR TOTALS BY FAA ATA SYSTEM CHAPTER | | | | 71-79 | 80-85 | TOTAL |
|------------------|-------------------|-------|-------|--------------------------------------|-------|-------|-------|-------|-------|-------|
| | | | | 30-38 | 45-49 | 51-57 | 61-67 | | | |
| SNIAS | AS350B | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| SNIAS | AS350B2 | 0 | 1 | 0 | 0 | 1 | 0 | 1 | 0 | 3 |
| TOTALS | | 0 | 53 | 44 | 0 | 14 | 59 | 59 | 15 | 244 |

(End of AIR CARRIER SUMMARY INDEX by OPERATOR Report)

JOINT AIRCRAFT SYSTEM/COMPONENT CODE TABLE

PREFACE

The Joint Aircraft System/Component (JASC) Code Table is a modified version of the Air Transport Association of America (ATA), Specification 100 code. It was developed by the Federal Aviation Administration's (FAA), Aviation Data Systems Branch (AFS-620). Technical support was provided by the Galaxy Scientific Corporation, and various representatives of the air carrier and general aviation community.

Over the past four years, the JASC format of the ATA Spec 100 code has gained widespread industry acceptance. In a harmonized effort, the FAA's counterparts in Australia and Canada have adopted the JASC code with only a few exceptions. Some Canadian aircraft manufacturers have also recently adopted this new standard.

This code table is constructed by using the new JASC four (4) digit code, along with an abbreviated code title. The abbreviated titles have been modified in some cases to clarify the intended use of the accompanying code. This table can be used as a quick reference chart, to assist in the coding and review of aircraft structures or systems data (i.e., Service Difficulty Report (SDR), Accident/Incident Report).

The current coding scheme used in the JASC code was introduced in May 1991, for the technical classification of SDR's. Its predecessor, the FAA aircraft system/component code, was a similar but more complex eight-digit code which was developed over 25 years ago. It was constructed around the computer technology of that period. It consisted of a four digit numerical code plus a four alpha character code to make data retrieval possible. Since that time, computer technology has advanced many fold. Reducing the code from eight to four characters simplifies coding, and in some cases, makes JASC coding match the ATA Specification 100 first three digits, which are used to identify aircraft systems. The ATA code does not reference the fourth digit, so it is free to be used for identifying components.

The JASC code aircraft structural section has increased due to problems inherent with aging aircraft. As an example, FAA code 5301 SXBD was expanded to 20 items due to the high rate of reporting in this area (8021 structural reports were received in 1989). In some instances, there was very little reporting and codes were combined into other systems if the safety impact was not significant. The overall reduction in codes has been from 568 FAA codes to 488 JASC codes, with the significant increase being in the structural area as stated earlier.

The JASC code divides the engine section into two major code groups to separate the turbine and reciprocating engines. The codes for the turbine engines are in JASC Chapter 72, Turbine/Turboprop Engine. The codes for the reciprocating engines are now exclusively found in JASC Chapter 85, Reciprocating Engine.

The other major deviation from ATA Spec 100 is in ATA section 2730, specifically involves the stall warning system. Early technology (primarily on smaller aircraft) directly linked the sensing of flight attitude to one of the components which furnished the means of manually controlling the flight attitude characteristics (elevator). Today, most large transport category aircraft utilize electronic units to sense the change in the environmental condition called stall, and use the data to influence navigation. ATA section 3410, Flight Environment Data, includes high speed warning in its code definition. Stall warning (low speed) is the reciprocal term of high speed warning, so its filing under the same code appears more logical. Thus, with the JASC code it was decided to move the stall warning system to Chapter 34 under the separate code JASC code 3418, Stall Warning System.

The FAA is continuing to pursue worldwide involvement from operators and manufacturers in addressing the need for international standardization of aircraft system/component codes. The ultimate goal is to develop a universal aircraft/component numbering standard which can be used in the manufacturer's maintenance manual, wiring diagram manual, system manuals and illustrated parts catalog. This harmonized standard must be a usable standard for the aircraft manufacturers, air carrier operators and the general aviation community.

We welcome comments and feedback regarding the possible forming of working groups to achieve this long range consideration of possibly harmonizing the ATA Specification 100 code and the JASC code. Comments may be directed to the FAA, Aviation Data Sytem Branch, AFS-620, P.O. Box 25082, Oklahoma City, OK 73125.

JOINT AIRCRAFT SYSTEM/COMPONENT CODE TABLE

JASC/ TITLE

11 PLACARDS AND MARKINGS

1100 PLACARDS AND MARKINGS

12 SERVICING

1210 FUEL SERVICING
1220 OIL SERVICING
1230 HYDRAULIC FLUID SERVICING
1240 COOLANT SERVICING

18 HELICOPTER VIBRATION

1800 HELICOPTER VIB/NOISE ANALYSIS
1810 HELICOPTER VIBRATION ANALYSIS
1820 HELICOPTER NOISE ANALYSIS

21 AIR CONDITIONING

2100 AIR CONDITIONING SYSTEM
2110 CABIN COMPRESSOR SYSTEM
2120 AIR DISTRIBUTION SYSTEM
2121 AIR DISTRIBUTION FAN
2130 CABIN PRESSURE CONTROL SYSTEM
2131 CABIN PRESSURE CONTROLLER
2132 CABIN PRESSURE INDICATOR
2133 PRESSURE REGUL/OUTFLOW VALVE
2134 CABIN PRESSURE SENSOR
2140 HEATING SYSTEM
2150 CABIN COOLING SYSTEM
2160 CABIN TEMPERATURE CONTROL SYSTEM
2161 CABIN TEMPERATURE CONTROLLER
2162 CABIN TEMPERATURE INDICATOR
2163 CABIN TEMPERATURE SENSOR
2170 HUMIDITY CONTROL SYSTEM

22 AUTO FLIGHT

2200 AUTO FLIGHT SYSTEM
2210 AUTOPILOT SYSTEM
2211 AUTOPILOT COMPUTER
2212 ALTITUDE CONTROLLER
2213 FLIGHT CONTROLLER
2214 AUTOPILOT TRIM INDICATOR
2215 AUTOPILOT MAIN SERVO
2216 AUTOPILOT TRIM SERVO
2220 SPEED-ATTITUDE CORRECT. SYSTEM
2230 AUTO THROTTLE SYSTEM
2250 AERODYNAMIC LOAD ALLEVIATING

23 COMMUNICATIONS

2300 COMMUNICATIONS SYSTEM
2310 HF COMMUNICATION SYSTEM
2311 UHF COMMUNICATION SYSTEM
2312 VHF COMMUNICATION SYSTEM
2320 DATA TRANSMISSION AUTO CALL
2330 ENTERTAINMENT SYSTEM
2340 INTERPHONE & PA SYSTEM
2350 AUDIO INTEGRATING SYSTEM
2360 STATIC DISCHARGE SYSTEM
2370 AUDIO/VIDEO MONITORING

24 ELECTRICAL POWER

2400 ELECTRICAL POWER SYSTEM
2410 ALTERNATOR-GENERATOR DRIVE
2420 AC GENERATION SYSTEM
2421 AC GENERATOR-ALTERNATOR
2422 AC INVERTER
2423 PHASE ADAPTER

24 ELECTRICAL POWER CONT'D

2424 AC REGULATOR
2425 AC INDICATING SYSTEM
2430 DC GENERATING SYSTEM
2431 BATTERY OVERHEAT WARN. SYSTEM
2432 BATTERY/CHARGER SYSTEM
2433 DC RECTIFIER-CONVERTER
2434 DC GENERATOR-ALTERNATOR
2435 STARTER-GENERATOR
2436 DC REGULATOR
2437 DC INDICATING SYSTEM
2440 EXTERNAL POWER SYSTEM
2450 AC POWER DISTRIBUTION SYSTEM
2460 DC POWER/DISTRIBUTION SYSTEM

25 EQUIPMENT/FURNISHINGS

2500 CABIN EQUIPMENT/FURNISHINGS
2510 FLIGHT COMPARTMENT EQUIPMENT
2520 PASSENGER COMPARTMENT EQUIPMENT
2530 BUFFET/GALLEYS
2540 LAVATORIES
2550 CARGO COMPARTMENTS
2551 AGRICULTURAL SPRAY SYSTEM
2560 EMERGENCY EQUIPMENT
2561 LIFE JACKET
2562 EMERGENCY LOCATOR BEACON
2563 PARACHUTE
2564 LIFE RAFT
2565 ESCAPE SLIDE
2570 ACCESSORY COMPARTMENT
2571 BATTERY BOX STRUCTURE
2572 ELECTRONIC SHELF SECTION

26 FIRE PROTECTION

2600 FIRE PROTECTION SYSTEM
2610 DETECTION SYSTEM
2611 SMOKE DETECTION
2612 FIRE DETECTION
2613 OVERHEAT DETECTION
2620 EXTINGUISHING SYSTEM
2621 FIRE BOTTLE, FIXED
2622 FIRE BOTTLE, PORTABLE

27 FLIGHT CONTROLS

2700 FLIGHT CONTROL SYSTEM
2701 CONTROL COLUMN SECTION
2710 AILERON CONTROL SYSTEM
2711 AILERON TAB CONTROL SYSTEM
2720 RUDDER CONTROL SYSTEM
2721 RUDDER TAB CONTROL SYSTEM
2722 RUDDER ACTUATOR
2730 ELEVATOR CONTROL SYSTEM
2731 ELEVATOR TAB CONTROL SYSTEM
2740 STABILIZER CONTROL SYSTEM
2741 STABILIZER POSITION INDICATING
2742 STABILIZER ACTUATOR
2750 TE FLAP CONTROL SYSTEM
2751 TE FLAP POSITION IND. SYSTEM
2752 TE FLAP ACTUATOR
2760 DRAG CONTROL SYSTEM
2761 DRAG CONTROL ACTUATOR
2770 GUST LOCK/DAMPER SYSTEM
2780 LE FLAP CONTROL SYSTEM
2781 LE FLAP POSITION IND. SYSTEM
2782 LE FLAP ACTUATOR

28 FUEL

2800 AIRCRAFT FUEL SYSTEM
2810 FUEL STORAGE
2820 ACFT FUEL DISTRIB. SYSTEM
2821 ACFT FUEL FILTER/STRAINER
2822 FUEL BOOST PUMP
2823 FUEL SELECTOR/SHUTOFF VALVE
2824 FUEL TRANSFER VALVE
2830 FUEL DUMP SYSTEM
2840 ACFT FUEL INDICATING
2841 FUEL QUANTITY INDICATOR
2842 FUEL QUANTITY SENSOR
2843 FUEL TEMPERATURE INDICATING
2844 FUEL PRESSURE INDICATOR

29 HYDRAULIC POWER

2900 HYDRAULIC POWER SYSTEM
2910 HYDRAULIC, MAIN SYSTEM
2911 HYDRAULIC POWER-ACCUMULATOR-MAIN
2912 HYDRAULIC FILTER-MAIN SYSTEM
2913 HYDRAULIC PUMP. ELECT-ENG.-MAIN
2914 HYDRAULIC HANDPUMP-MAIN
2915 HYDRAULIC PRESSURE RELIEF VLV-MAIN
2916 HYDRAULIC RESERVOIR-MAIN
2917 HYDRAULIC PRESSURE REGULATOR-MAIN
2920 HYDRAULIC, AUXILIARY SYSTEM
2921 HYDRAULIC ACCUMULATOR-AUXILIARY
2922 HYDRAULIC FILTER-AUXILIARY
2923 HYDRAULIC PUMP-AUXILIARY
2925 HYDRAULIC PRESSURE RELIEF-AUXILIARY
2926 HYDRAULIC RESERVOIR-AUXILIARY
2927 HYDRAULIC PRESSURE REGULATOR-AUX.
2930 HYDRAULIC SYSTEM INDICATING
2931 HYDRAULIC PRESSURE INDICATOR
2932 HYDRAULIC PRESSURE SENSOR
2933 HYDRAULIC QUANTITY INDICATOR
2934 HYDRAULIC QUANTITY SENSOR

30 ICE AND RAIN PROTECTION

3000 ICE/RAIN PROTECTION SYSTEM
3010 AIRFOIL ANTI/DE-ICE SYSTEM
3020 AIR INTAKE ANTI/DE-ICE SYSTEM
3030 PITOT/STATIC ANTI-ICE SYSTEM
3040 WINDSHIELD/DOOR RAIN/ICE REMOVAL
3050 ANTENNA/RADOME ANTI-ICE/DE-ICE SYSTEM
3060 PROP/ROTOR ANTI-ICE/DE-ICE SYSTEM
3070 WATER LINE ANTI-ICE SYSTEM
3080 ICE DETECTION

31 INSTRUMENTS

3100 INDICATING/RECORDING SYSTEM
3110 INSTRUMENT PANEL
3120 INDEPENDENT INSTRUMENTS (CLOCK, ETC.)
3130 DATA RECORDERS (FLT/MAINT)
3140 CENTRAL COMPUTERS (EICAS)
3150 CENTRAL WARNING
3160 CENTRAL DISPLAY
3170 AUTOMATIC DATA

32 LANDING GEAR

3200 LANDING GEAR SYSTEM
3201 LANDING GEAR/WHEEL FAIRING
3210 MAIN LANDING GEAR
3211 MAIN LANDING GEAR ATTACH SECTION
3212 EMERGENCY FLOTATION SECTION
3213 MAIN LANDING GEAR STRUT/AXLE/TRUCK
3220 NOSE/TAIL LANDING GEAR
3221 NOSE/TAIL LANDING GEAR ATTACH SECTION
3222 NOSE/TAIL LANDING GEAR STRUT/AXLE
3230 LANDING GEAR RETRACT/EXT. SYSTEM
3231 LANDING GEAR DOOR RETRACT SECTION
3232 LANDING GEAR DOOR ACTUATOR
3233 LANDING GEAR ACTUATOR
3234 LANDING GEAR SELECTOR
3240 LANDING GEAR BRAKE SYSTEM
3241 BRAKE ANTI-SKID SECTION
3242 BRAKE
3243 MASTER CYL/BRAKE VALVE
3244 TIRE
3245 TIRE TUBE
3246 WHEEL/SKI/FLOAT
3250 LANDING GEAR STEERING SYSTEM
3251 STEERING UNIT
3252 SHIMMY DAMPER
3260 LANDING GEAR POSITION & WARNING
3270 AUXILIARY GEAR (TAIL SKID)

33 LIGHTS

3300 LIGHTING SYSTEM
3310 FLIGHT COMPARTMENT LIGHTING
3320 PASSENGER COMPARTMENT LIGHTING
3330 CARGO COMPARTMENT LIGHTING
3340 EXTERIOR LIGHTING
3350 EMERGENCY LIGHTING

34 NAVIGATION

3400 NAVIGATION SYSTEM
3410 FLIGHT ENVIRONMENT DATA
3411 PITOT/STATIC SYSTEM
3412 OUTSIDE AIR TEMP. IND./SENSOR
3413 RATE OF CLIMB INDICATOR
3414 AIRSPEED/MACH INDICATING
3415 HIGH SPEED WARNING
3416 ALTIMETER, BAROMETRIC/ENCODER

34 NAVIGATION CONT'D

3417 AIR DATA COMPUTER
3418 STALL WARNING SYSTEM
3420 ATTITUDE AND DIRECTION DATA SYSTEM
3421 ATTITUDE GYRO & IND. SYSTEM
3422 DIRECTIONAL GYRO & IND. SYSTEM
3423 MAGNETIC COMPASS
3424 TURN & BANK/RATE OF TURN INDICATOR
3425 INTEGRATED FLT. DIRECTOR SYSTEM
3430 LANDING & TAXI AIDS
3431 LOCALIZER/VOR SYSTEM
3432 GLIDE SLOPE SYSTEM
3433 MICROWAVE LANDING SYSTEM
3434 MARKER BEACON SYSTEM
3435 HEADS UP DISPLAY SYSTEM
3436 WIND SHEAR DETECTION SYSTEM
3440 INDEPENDENT POS. DETERMINING SYSTEM
3441 INERTIAL GUIDANCE SYSTEM
3442 WEATHER RADAR SYSTEM
3443 DOPPLER SYSTEM
3444 GROUND PROXIMITY SYSTEM
3445 AIR COLLISION AVOIDANCE SYSTEM (TCAS)
3446 NON RADAR WEATHER SYSTEM
3450 DEPENDENT POSITION DETERMINING SYSTEM
3451 DME/TACAN SYSTEM
3452 ATC TRANSPONDER SYSTEM
3453 LORAN SYSTEM
3454 VOR SYSTEM
3455 ADF SYSTEM
3456 OMEGA NAVIGATION SYSTEM
3457 GLOBAL POSITIONING SYSTEM
3460 FLIGHT MANAGE. COMPUTING SYSTEM

35 OXYGEN

3500 OXYGEN SYSTEM
3510 CREW OXYGEN SYSTEM
3520 PASSENGER OXYGEN SYSTEM
3530 PORTABLE OXYGEN SYSTEM

36 PNEUMATIC

3600 PNEUMATIC SYSTEM
3610 PNEUMATIC DISTRIBUTION SYSTEM
3620 PNEUMATIC INDICATING SYSTEM

37 VACUUM

3700 VACUUM SYSTEM
3710 VACUUM DISTRIBUTION SYSTEM
3720 VACUUM INDICATING SYSTEM

38 WATER/WASTE

3800 WATER & WASTE SYSTEM
3810 POTABLE WATER SYSTEM
3820 WASH WATER SYSTEM
3830 WASTE DISPOSAL SYSTEM
3840 AIR SUPPLY (WATER PRESS. SYSTEM)

45 CENTRAL MAINT. SYSTEM

4500 CENTRAL MAINT. COMPUTER

49 AIRBORNE AUXILIARY POWER

4900 AIRBORNE APU SYSTEM
4910 APU COWLING/CONTAINMENT
4920 APU CORE ENGINE
4930 APU ENGINE FUEL & CONTROL
4940 APU START/IGNITION SYSTEM
4950 APU BLEED AIR SYSTEM
4960 APU CONTROLS
4970 APU INDICATING SYSTEM
4980 APU EXHAUST SYSTEM
4990 APU OIL SYSTEM

51 STANDARD PRACTICES/STRUCTURES

5100 STANDARD PRACTICES/STRUCTURES
5101 AIRCRAFT STRUCTURES
5102 BALLOON REPORTS

52 DOORS

5200 DOORS
5210 PASSENGER/CREW DOORS
5220 EMERGENCY EXIT
5230 CARGO/BAGGAGE DOORS
5240 SERVICE DOORS
5241 GALLEY DOORS
5242 E/E COMPARTMENT DOORS
5243 HYDRAULIC COMPARTMENT DOORS
5244 ACCESSORY COMPARTMENT DOORS
5245 AIR CONDITIONING COMPART. DOORS
5246 FLUID SERVICE DOORS

5247 APU DOORS
5248 TAIL CONE DOORS
5250 FIXED INNER DOORS
5260 ENTRANCE STAIRS
5270 DOOR WARNING SYSTEM
5280 LANDING GEAR DOORS

53 FUSELAGE

5300 FUSELAGE STRUCTURE (GENERAL)
5301 AERIAL TOW EQUIPMENT
5302 ROTORCRAFT TAIL BOOM
5310 FUSELAGE MAIN STRUCTURE
5311 FUSELAGE MAIN FRAME
5312 FUSELAGE MAIN BULKHEAD
5313 FUSELAGE MAIN LONGERON/STRINGER
5314 FUSELAGE MAIN KEEL
5315 FUSELAGE MAIN FLOOR BEAM
5320 FUSELAGE MISCELLANEOUS STRUCTURE
5321 FUSELAGE FLOOR PANEL
5322 FUSELAGE INTERNAL MOUNT STRUCTURE
5323 FUSELAGE INTERNAL STAIRS
5324 FUSELAGE FIXED PARTITIONS
5330 FUSELAGE MAIN PLATE/SKIN
5340 FUSELAGE MAIN ATTACH FITTINGS
5341 WING ATTACH FITTINGS (ON FUSELAGE)
5342 STABILIZER ATTACH FITTINGS
5343 LANDING GEAR ATTACH FITTINGS
5344 FUSELAGE DOOR HINGES
5345 FUSELAGE EQUIPMENT ATTACH FITTINGS
5346 POWERPLANT ATTACH FITTINGS
5347 SEAT/CARGO ATTACH FITTINGS
5350 FUSELAGE AERODYNAMIC FAIRINGS

54 NACELLES/PYLONS

5400 NACELLE/PYLON STRUCTURE
5410 MAIN FRAME (ON NACELLE/PYLON)
5411 FRAME/SPAR/RIB(NACELLE/PYLON)
5412 BULKHEAD/FIREWALL (NAC/PYLON)
5413 LONGERON/STRINGER (NAC/PYLON)
5414 PLATE SKIN (NAC/PYLONS)
5415 ATTACH FITTINGS (NAC/PYLON)

55 STABILIZERS

5500 EMPENNAGE STRUCTURE
5510 HORIZONTAL STABILIZER STRUCTURE
5511 HORIZONTAL STABILIZER SPAR/RIB
5512 HORIZONTAL STABILIZER PLATE/SKIN
5513 HORIZONTAL STABILIZER TAB STRUCTURE
5520 ELEVATOR STRUCTURE

55 STABILIZERS CONT'D

5521 ELEVATOR SPAR/RIB STRUCTURE
5522 ELEVATOR PLATES/SKIN STRUCTURE
5523 ELEVATOR TAB STRUCTURE
5530 VERTICAL STABILIZER STRUCTURE
5531 VERTICAL STABILIZER SPAR/RIB STRUCTURE
5532 VERTICAL STABILIZER PLATES/SKIN
5533 VENTRAL STRUCTURE (ON VERT. STAB)
5540 RUDDER STRUCTURE
5541 RUDDER SPAR/RIB STRUCTURE
5542 RUDDER PLATE/SKIN STRUCTURE
5543 RUDDER TAB STRUCTURE
5550 EMPENNAGE FLT. CONT. ATTACH FITTING
5551 HORIZONTAL STABILIZER ATTACH FITTING
5552 ELEVATOR/TAB ATTACH FITTINGS
5553 VERT. STAB. ATTACH FITTINGS
5554 RUDDER/TAB ATTACH FITTINGS

56 WINDOWS

5600 WINDOW/WINDSHIELD SYSTEM
5610 FLIGHT COMPARTMENT WINDOWS
5620 PASSENGER COMPARTMENT WINDOWS
5630 DOOR WINDOWS
5640 INSPECTION WINDOWS

57 WINGS

5700 WING STRUCTURE
5710 WING MAIN FRAME STRUCTURE
5711 WING SPAR STRUCTURE
5712 WING RIB STRUCTURE
5713 WING LONGERON/STRINGER
5714 WING CENTER BOX
5720 WING MISCELLANEOUS STRUCTURE
5730 WING PLATES/SKINS
5740 WING ATTACH FITTINGS
5741 WING, FUSELAGE ATTACH FITTINGS
5742 WING, NAC/PYLON ATTACH FITTINGS
5743 WING, LANDING GEAR ATTACH FITTINGS
5744 CONTROL SURFACE ATTACH FITTINGS
5750 WING CONTROL SURFACE STRUCTURE
5751 AILERON STRUCTURE
5752 AILERON TAB STRUCTURE
5753 TE FLAP STRUCTURE
5754 LEADING EDGE DEVICE STRUCTURE
5755 SPOILER STRUCTURE

61 PROPELLERS/PROPULSORS

6100 PROPELLER SYSTEM
6110 PROPELLER ASSEMBLY
6111 PROPELLER BLADE SECTION
6112 PROPELLER DE-ICE BOOT SECTION
6113 PROPELLER SPINNER SECTION
6114 PROPELLER HUB SECTION
6120 PROPELLER CONTROL SYSTEM
6121 PROPELLER SYNCHRONIZER SECTION
6122 PROPELLER GOVERNOR
6123 PROPELLER FEATHERING/REVERSING
6130 PROPELLER BRAKING
6140 PROPELLER INDICATING SYSTEM

62 MAIN ROTOR

6200 MAIN ROTOR SYSTEM
6210 MAIN ROTOR BLADES
6220 MAIN ROTOR HEAD
6230 MAIN ROTOR MAST/SWASHPLATE
6240 MAIN ROTOR INDICATING SYSTEM

63 MAIN ROTOR DRIVE

6300 MAIN ROTOR DRIVE SYSTEM
6310 ENGINE/TRANSMISSION COUPLING
6320 MAIN ROTOR GEARBOX
6321 MAIN ROTOR BRAKE
6322 ROTORCRAFT COOLING FAN SYSTEM
6330 MAIN ROTOR TRANSMISSION MOUNT
6340 ROTOR DRIVE INDICATING SYSTEM

64 TAIL ROTOR

6400 TAIL ROTOR SYSTEM
6410 TAIL ROTOR BLADE
6420 TAIL ROTOR HEAD
6440 TAIL ROTOR INDICATING SYSTEM

65 TAIL ROTOR DRIVE

6500 TAIL ROTOR DRIVE SYSTEM
6510 TAIL ROTOR DRIVE SHAFT
6520 TAIL ROTOR GEARBOX
6540 TAIL ROTOR DRIVE INDICATING SYSTEM

67 ROTORS FLIGHT CONTROL

6700 ROTORCRAFT FLIGHT CONTROL
6710 MAIN ROTOR CONTROL
6711 TILT ROTOR FLIGHT CONTROL
6720 TAIL ROTOR CONTROL SYSTEM
6730 ROTORCRAFT SERVO SYSTEM

71 POWERPLANT

7100 POWERPLANT SYSTEM
7110 ENGINE COWLING SYSTEM
7111 COWL FLAP SYSTEM
7112 ENGINE AIR BAFFLE SECTION
7120 ENGINE MOUNT SECTION
7130 ENGINE FIRESEALS
7160 ENGINE AIR INTAKE SYSTEM
7170 ENGINE DRAINS

72 TURBINE/TURBOPROP ENGINE

7200 ENGINE (TURBINE/TURBOPROP)
7210 TURBINE ENGINE REDUCTION GEAR
7220 TURBINE ENGINE AIR INLET SECTION
7230 TURBINE ENGINE COMPRESSOR SECTION
7240 TURBINE ENGINE COMBUSTION SECTION
7250 TURBINE SECTION
7260 TURBINE ENGINE ACCESSORY DRIVE
7261 TURBINE ENGINE OIL SYSTEM
7270 TURBINE ENGINE BYPASS SECTION

73 ENGINE FUEL & CONTROL

7300 ENGINE FUEL & CONTROL
7310 ENGINE FUEL DISTRIBUTION
7311 ENGINE FUEL-OIL COOLER
7312 FUEL HEATER
7313 FUEL INJECTOR NOZZLE
7314 ENGINE FUEL PUMP
7320 FUEL CONTROLLING SYSTEM
7321 FUEL CONTROL/ELECTRONIC
7322 FUEL CONTROL/CARBURETOR
7323 TURBINE GOVERNOR
7324 FUEL DIVIDER
7330 ENGINE FUEL INDICATING SYSTEM
7331 FUEL FLOW INDICATING
7332 FUEL PRESSURE INDICATING
7333 FUEL FLOW SENSOR
7334 FUEL PRESSURE SENSOR

74 IGNITION

7400 IGNITION SYSTEM
7410 IGNITION POWER SUPPLY
7411 LOW TENSION COIL
7412 EXCITER
7413 INDUCTION VIBRATOR
7414 MAGNETO/DISTRIBUTOR
7420 IGNITION HARNESS (DISTRIBUTION)
7421 SPARK PLUG/IGNITER
7430 IGNITION SWITCHING

75 AIR

7500 ENGINE BLEED AIR SYSTEM
7510 ENGINE ANTI-ICING SYSTEM
7520 ENGINE COOLING SYSTEM
7530 COMPRESSOR BLEED CONTROL
7531 COMPRESSOR BLEED GOVERNOR
7532 COMPRESSOR BLEED VALVE
7540 BLEED AIR INDICATING SYSTEM

76 ENGINE CONTROLS

7600 ENGINE CONTROLS
7601 ENGINE SYNCHRONIZING
7602 MIXTURE CONTROL
7603 POWER LEVER
7620 ENGINE EMERGENCY SHUTDOWN SYSTEM

77 ENGINE INDICATING

7700 ENGINE INDICATING SYSTEM
7710 POWER INDICATING SYSTEM
7711 ENGINE PRESSURE RATIO (EPR)
7712 ENGINE BMEP/TORQUE INDICATING
7713 MANIFOLD PRESSURE (MP) INDICATING
7714 ENGINE RPM INDICATING SYSTEM
7720 ENGINE TEMP. INDICATING SYSTEM
7721 CYLINDER HEAD TEMP (CHT) INDICATING
7722 ENG. EGT/TIT INDICATING SYSTEM
7730 ENGINE IGNITION ANALYZER SYSTEM
7731 ENGINE IGNITION ANALYZER
7732 ENGINE VIBRATION ANALYZER
7740 ENGINE INTEGRATED INSTRUMENT SYSTEM

78 ENGINE EXHAUST

7800 ENGINE EXHAUST SYSTEM
7810 ENGINE COLLECTOR/TAILOPIPE/NOZZLE
7820 ENGINE NOISE SUPPRESSOR
7830 THRUST REVERSER

79 ENGINE OIL

7900 ENGINE OIL SYSTEM (AIRFRAME)
7910 ENGINE OIL STORAGE (AIRFRAME)
7920 ENGINE OIL DISTRIBUTION (AIRFRAME)
7921 ENGINE OIL COOLER
7922 ENGINE OIL TEMP. REGULATOR
7923 OIL SHUTOFF VALVE
7930 ENGINE OIL INDICATING SYSTEM
7931 ENGINE OIL PRESSURE
7932 ENGINE OIL QUANTITY
7933 ENGINE OIL TEMPERATURE

80 STARTING

8000 ENGINE STARTING SYSTEM
8010 ENGINE CRANKING
8011 ENGINE STARTER
8012 ENGINE START VALVES/CONTROLS

81 TURBOCHARGING

8100 EXHAUST TURBINE SYSTEM (RECIP)
8110 POWER RECOVERY TURBINE (RECIP)
8120 EXHAUST TURBOCHARGER

82 WATER INJECTION

8200 WATER INJECTION SYSTEM

83 ACCESSORY GEARBOXES

8300 ACCESSORY GEARBOXES

85 RECIPROCATING ENGINE

8500 ENGINE (RECIPROCATING)
8510 RECIPROCATING ENGINE FRONT SECTION
8520 RECIPROCATING ENGINE POWER SECTION

8530 RECIPROCATING ENGINE CYLINDER SECTION
8540 RECIPROCATING ENGINE REAR SECTION
8550 RECIPROCATING ENGINE OIL SYSTEM

MECHANICS CREED

UPON MY HONOR I swear that I shall hold in sacred trust the rights and privileges conferred upon me as a certified mechanic. Knowing full well that the safety and lives of others are dependent upon my skill and judgment, I shall never knowingly subject others to risks which I would not be willing to assume for myself, or for those dear to me.

IN DISCHARGING this trust, I pledge myself never to undertake work or approve work which I feel to be beyond the limits of my knowledge; nor shall I allow any non-certificated superior to persuade me to approve aircraft or equipment as airworthy against my better judgment; nor shall I permit my judgment to be influenced by money or other personal gain; nor shall I pass as airworthy aircraft or equipment about which I am in doubt, either as a result of direct inspection or uncertainty regarding the ability of others who have worked on it to accomplish their work satisfactorily.

I REALIZE the grave responsibility which is mine as a certified airman, to exercise my judgment on the airworthiness of aircraft and equipment. I, therefore, pledge unyielding adherence to these precepts for the advancement of aviation and for the dignity of my vocation.